

# RECEIVED

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

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

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

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

JAN 04 2011

HOBBS

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised July 18, 2010

Submit one copy to appropriate  
District Office

HOBBSON CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

|                                   |                                                        |                                          |
|-----------------------------------|--------------------------------------------------------|------------------------------------------|
| API Number<br><b>30-005-29171</b> | Pool Code<br><b>97772</b>                              | Pool Name<br><b>Wildcat Abo/Wolfcamp</b> |
| Property Code<br><b>30444</b>     | Property Name<br><b>NASSAU "29" STATE COM</b>          | Well Number<br><b>4</b>                  |
| OGRID No.<br><b>162683</b>        | Operator Name<br><b>CIMAREX ENERGY CO. OF COLORADO</b> | Elevation<br><b>4434'</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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| M             | 29      | 15 S     | 31 E  |         | 710           | SOUTH            | 330           | WEST           | CHAVES |

### 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| P             | 29      | 15 S     | 31 E  |         | 660           | SOUTH            | 330           | EAST           | CHAVES |

| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|-----------------|-----------------|--------------------|-----------|
| 160             |                 | P                  |           |

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

|                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>SURFACE LOCATION</b><br/>Lat - N 32°58'53.638"<br/>Long - W 103°51'05.820"<br/>NMSPCE - N 721165.40<br/>E 689052.95<br/>(NAD-83)</p>                                                                                                                                                                                                                                                          |  | <p><b>PROPOSED BOTTOM HOLE LOCATION</b><br/>Lat - N 32°58'53.089"<br/>Long - W 103°50'11.471"<br/>NMSPCE - N 721131.72<br/>E 693682.60<br/>(NAD-83)</p> |  | <p><b>OPERATOR CERTIFICATION</b><br/>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 unCHAVESsed 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 working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Natalie Krueger</i> 1/4/2011<br/>Signature Date<br/>Natalie Krueger<br/>Printed Name<br/>nkrueger@cimarex.com<br/>Email Address</p> |
| <p><b>SURVEYOR CERTIFICATION</b><br/>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.</p> <p><b>GARY L. JONES</b><br/>MEMBER, N.M.S.P.C.E.<br/>Date Surveyed 12/23/2010<br/>Signature &amp; Seal of Professional Surveyor<br/>23844</p> |  | <p>Certificate No. Gary L. Jones 7977<br/>BASIN SURVEYS 23844</p>                                                                                       |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



## **Cimarex Energy Co.**

Chaves County

Sec 29 - T15S - R31E

Nassau State Com #4

Wellbore #1

Plan: Plan #1

## **Standard Planning Report**

03 January, 2011





# Great White Directional Services

## Planning Report



Database: EDM 5000.1 Single User Db  
Company: Cimarex Energy Co.  
Project: Chaves County  
Site: Sec 29 - T15S - R31E  
Well: Nassau State Com #4  
Wellbore: Wellbore #1  
Design: Plan #1

Local Co-ordinate Reference: Well Nassau State Com #4  
TVD Reference: WELL (copy) @ 0.0usft (Original Well Elev)  
MD Reference: WELL (copy) @ 0.0usft (Original Well Elev)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

|             |                           |               |                |
|-------------|---------------------------|---------------|----------------|
| Project     | Chaves County             |               |                |
| Map System: | US State Plane 1983       | System Datum: | Mean Sea Level |
| Geo Datum:  | North American Datum 1983 |               |                |
| Map Zone:   | New Mexico Eastern Zone   |               |                |

|                       |                      |              |                 |                             |
|-----------------------|----------------------|--------------|-----------------|-----------------------------|
| Site                  | Sec 29 - T15S - R31E |              |                 |                             |
| Site Position:        |                      | Northing:    | 725,073.55 usft | Latitude: 32° 59' 32.284 N  |
| From: Map             |                      | Easting:     | 689,035.43 usft | Longitude: 103° 51' 5.804 W |
| Position Uncertainty: | 0.0 usft             | Slot Radius: | 13-3/16 "       | Grid Convergence: 0.26 °    |

|                      |                     |                     |                        |                 |
|----------------------|---------------------|---------------------|------------------------|-----------------|
| Well                 | Nassau State Com #4 |                     |                        |                 |
| Well Position        | +N/-S               | -3,908.1 usft       | Northing:              | 721,165.40 usft |
|                      | +E/-W               | 17.5 usft           | Easting:               | 689,052.95 usft |
| Position Uncertainty | 0.0 usft            | Wellhead Elevation: | Ground Level: 0.0 usft |                 |

|           |             |             |                 |               |                     |
|-----------|-------------|-------------|-----------------|---------------|---------------------|
| Wellbore  | Wellbore #1 |             |                 |               |                     |
| Magnetics | Model Name  | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|           | IGRF200510  | 01/03/11    | 7.82            | 60.87         | 49,146              |

|                   |                            |                 |                 |                  |
|-------------------|----------------------------|-----------------|-----------------|------------------|
| Design            | Plan #1                    |                 |                 |                  |
| Audit Notes:      |                            |                 |                 |                  |
| Version:          | Phase:                     | PLAN            | Tie On Depth:   | 0.0              |
| Vertical Section: | Depth From (TVD)<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Direction<br>(°) |
|                   | 0.0                        | 0.0             | 0.0             | 90.42            |

| Plan Sections            |                    |                |                          |                 |                 |                            |                           |                          |            |           |
|--------------------------|--------------------|----------------|--------------------------|-----------------|-----------------|----------------------------|---------------------------|--------------------------|------------|-----------|
| Measured Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Dogleg Rate<br>(°/100usft) | Build Rate<br>(°/100usft) | Turn Rate<br>(°/100usft) | TFO<br>(°) | Target    |
| 0.0                      | 0.00               | 0.00           | 0.0                      | 0.0             | 0.0             | 0.00                       | 0.00                      | 0.00                     | 0.00       |           |
| 8,530.0                  | 0.00               | 0.00           | 8,530.0                  | 0.0             | 0.0             | 0.00                       | 0.00                      | 0.00                     | 0.00       |           |
| 8,830.0                  | 90.00              | 90.42          | 8,721.0                  | -1.4            | 191.0           | 30.00                      | 30.00                     | 0.00                     | 90.42      |           |
| 13,268.8                 | 90.00              | 90.42          | 8,721.0                  | -33.9           | 4,629.6         | 0.00                       | 0.00                      | 0.00                     | 0.00       | Nassau #4 |



# Great White Directional Services

## Planning Report



Database: EDM 5000.1 Single User Db  
Company: Cimarex Energy Co.  
Project: Chaves County  
Site: Sec 29 - T15S - R31E  
Well: Nassau State Corn #4  
Wellbore: Wellbore #1  
Design: Plan #1

Local Co-ordinate Reference: Well Nassau State Corn #4  
TVD Reference: WELL (copy) @ 0.0usft (Original Well Elev)  
MD Reference: WELL (copy) @ 0.0usft (Original Well Elev)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

### Planned Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 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                        |
| 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                        |
| 1,600.0                     | 0.00               | 0.00           | 1,600.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 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                        |
| 2,800.0                     | 0.00               | 0.00           | 2,800.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 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                        |
| 3,100.0                     | 0.00               | 0.00           | 3,100.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 3,200.0                     | 0.00               | 0.00           | 3,200.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 3,300.0                     | 0.00               | 0.00           | 3,300.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 3,400.0                     | 0.00               | 0.00           | 3,400.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 3,500.0                     | 0.00               | 0.00           | 3,500.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 3,600.0                     | 0.00               | 0.00           | 3,600.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 3,700.0                     | 0.00               | 0.00           | 3,700.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 3,800.0                     | 0.00               | 0.00           | 3,800.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 3,900.0                     | 0.00               | 0.00           | 3,900.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,000.0                     | 0.00               | 0.00           | 4,000.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,100.0                     | 0.00               | 0.00           | 4,100.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,200.0                     | 0.00               | 0.00           | 4,200.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,300.0                     | 0.00               | 0.00           | 4,300.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,400.0                     | 0.00               | 0.00           | 4,400.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,500.0                     | 0.00               | 0.00           | 4,500.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,600.0                     | 0.00               | 0.00           | 4,600.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,700.0                     | 0.00               | 0.00           | 4,700.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,800.0                     | 0.00               | 0.00           | 4,800.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 4,900.0                     | 0.00               | 0.00           | 4,900.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 5,000.0                     | 0.00               | 0.00           | 5,000.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 5,100.0                     | 0.00               | 0.00           | 5,100.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 5,200.0                     | 0.00               | 0.00           | 5,200.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 5,300.0                     | 0.00               | 0.00           | 5,300.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |



# Great White Directional Services

## Planning Report



Database: EDM 5000.1 Single User Db  
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Local Co-ordinate Reference: Well Nassau State Corn #4  
 TVD Reference: WELL (copy) @ 0.0usft (Original Well Elev)  
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 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

### Planned Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 5,400.0                     | 0.00               | 0.00           | 5,400.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 5,500.0                     | 0.00               | 0.00           | 5,500.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 5,600.0                     | 0.00               | 0.00           | 5,600.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 5,700.0                     | 0.00               | 0.00           | 5,700.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 5,800.0                     | 0.00               | 0.00           | 5,800.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 5,900.0                     | 0.00               | 0.00           | 5,900.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,000.0                     | 0.00               | 0.00           | 6,000.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,100.0                     | 0.00               | 0.00           | 6,100.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,200.0                     | 0.00               | 0.00           | 6,200.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,300.0                     | 0.00               | 0.00           | 6,300.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,400.0                     | 0.00               | 0.00           | 6,400.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,500.0                     | 0.00               | 0.00           | 6,500.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,600.0                     | 0.00               | 0.00           | 6,600.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,700.0                     | 0.00               | 0.00           | 6,700.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,800.0                     | 0.00               | 0.00           | 6,800.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 6,900.0                     | 0.00               | 0.00           | 6,900.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,000.0                     | 0.00               | 0.00           | 7,000.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,100.0                     | 0.00               | 0.00           | 7,100.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,200.0                     | 0.00               | 0.00           | 7,200.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,300.0                     | 0.00               | 0.00           | 7,300.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,400.0                     | 0.00               | 0.00           | 7,400.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,500.0                     | 0.00               | 0.00           | 7,500.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,600.0                     | 0.00               | 0.00           | 7,600.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,700.0                     | 0.00               | 0.00           | 7,700.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,800.0                     | 0.00               | 0.00           | 7,800.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 7,900.0                     | 0.00               | 0.00           | 7,900.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 8,000.0                     | 0.00               | 0.00           | 8,000.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 8,100.0                     | 0.00               | 0.00           | 8,100.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 8,200.0                     | 0.00               | 0.00           | 8,200.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 8,300.0                     | 0.00               | 0.00           | 8,300.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 8,400.0                     | 0.00               | 0.00           | 8,400.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 8,500.0                     | 0.00               | 0.00           | 8,500.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 8,530.0                     | 0.00               | 0.00           | 8,530.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| KOP 30/100 DLS @ 90.42 AZI  |                    |                |                             |                 |                 |                               |                               |                              |                             |
| 8,540.0                     | 3.00               | 90.42          | 8,540.0                     | 0.0             | 0.3             | 0.3                           | 30.00                         | 30.00                        | 0.00                        |
| 8,550.0                     | 6.00               | 90.42          | 8,550.0                     | 0.0             | 1.0             | 1.0                           | 30.00                         | 30.00                        | 0.00                        |
| 8,560.0                     | 9.00               | 90.42          | 8,559.9                     | 0.0             | 2.4             | 2.4                           | 30.00                         | 30.00                        | 0.00                        |
| 8,570.0                     | 12.00              | 90.42          | 8,569.7                     | 0.0             | 4.2             | 4.2                           | 30.00                         | 30.00                        | 0.00                        |
| 8,580.0                     | 15.00              | 90.42          | 8,579.4                     | 0.0             | 6.5             | 6.5                           | 30.00                         | 30.00                        | 0.00                        |
| 8,590.0                     | 18.00              | 90.42          | 8,589.0                     | -0.1            | 9.3             | 9.3                           | 30.00                         | 30.00                        | 0.00                        |
| 8,600.0                     | 21.00              | 90.42          | 8,598.4                     | -0.1            | 12.7            | 12.7                          | 30.00                         | 30.00                        | 0.00                        |
| 8,610.0                     | 24.00              | 90.42          | 8,607.7                     | -0.1            | 16.5            | 16.5                          | 30.00                         | 30.00                        | 0.00                        |
| 8,620.0                     | 27.00              | 90.42          | 8,616.7                     | -0.2            | 20.8            | 20.8                          | 30.00                         | 30.00                        | 0.00                        |
| 8,630.0                     | 30.00              | 90.42          | 8,625.5                     | -0.2            | 25.6            | 25.6                          | 30.00                         | 30.00                        | 0.00                        |
| 8,640.0                     | 33.00              | 90.42          | 8,634.0                     | -0.2            | 30.8            | 30.8                          | 30.00                         | 30.00                        | 0.00                        |
| 8,650.0                     | 36.00              | 90.42          | 8,642.3                     | -0.3            | 36.5            | 36.5                          | 30.00                         | 30.00                        | 0.00                        |
| 8,660.0                     | 39.00              | 90.42          | 8,650.2                     | -0.3            | 42.6            | 42.6                          | 30.00                         | 30.00                        | 0.00                        |
| 8,670.0                     | 42.00              | 90.42          | 8,657.8                     | -0.4            | 49.1            | 49.1                          | 30.00                         | 30.00                        | 0.00                        |
| 8,680.0                     | 45.00              | 90.42          | 8,665.0                     | -0.4            | 55.9            | 55.9                          | 30.00                         | 30.00                        | 0.00                        |
| 8,690.0                     | 48.00              | 90.42          | 8,671.9                     | -0.5            | 63.2            | 63.2                          | 30.00                         | 30.00                        | 0.00                        |
| 8,700.0                     | 51.00              | 90.42          | 8,678.4                     | -0.5            | 70.8            | 70.8                          | 30.00                         | 30.00                        | 0.00                        |
| 8,710.0                     | 54.00              | 90.42          | 8,684.5                     | -0.6            | 78.7            | 78.7                          | 30.00                         | 30.00                        | 0.00                        |
| 8,720.0                     | 57.00              | 90.42          | 8,690.2                     | -0.6            | 87.0            | 87.0                          | 30.00                         | 30.00                        | 0.00                        |



# Great White Directional Services

## Planning Report



Database: EDM 5000.1 Single User Db  
 Company: Cimarex Energy Co.  
 Project: Chaves County  
 Site: Sec 29 - T15S - R31E  
 Well: Nassau State Com #4  
 Wellbore: Wellbore #1  
 Design: Plan #1

Local Co-ordinate Reference: Well Nassau State Com #4  
 TVD Reference: WELL (copy) @ 0.0usft (Original Well Elev)  
 MD Reference: WELL (copy) @ 0.0usft (Original Well Elev)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

### Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 8,730.0               | 60.00           | 90.42       | 8,695.4               | -0.7         | 95.5         | 95.5                    | 30.00                   | 30.00                  | 0.00                  |
| 8,740.0               | 63.00           | 90.42       | 8,700.2               | -0.8         | 104.3        | 104.3                   | 30.00                   | 30.00                  | 0.00                  |
| 8,750.0               | 66.00           | 90.42       | 8,704.5               | -0.8         | 113.3        | 113.3                   | 30.00                   | 30.00                  | 0.00                  |
| 8,760.0               | 69.00           | 90.42       | 8,708.3               | -0.9         | 122.5        | 122.5                   | 30.00                   | 30.00                  | 0.00                  |
| 8,770.0               | 72.00           | 90.42       | 8,711.6               | -1.0         | 132.0        | 132.0                   | 30.00                   | 30.00                  | 0.00                  |
| 8,780.0               | 75.00           | 90.42       | 8,714.5               | -1.0         | 141.6        | 141.6                   | 30.00                   | 30.00                  | 0.00                  |
| 8,790.0               | 78.00           | 90.42       | 8,716.8               | -1.1         | 151.3        | 151.3                   | 30.00                   | 30.00                  | 0.00                  |
| 8,800.0               | 81.00           | 90.42       | 8,718.6               | -1.2         | 161.1        | 161.1                   | 30.00                   | 30.00                  | 0.00                  |
| 8,810.0               | 84.00           | 90.42       | 8,719.9               | -1.3         | 171.0        | 171.0                   | 30.00                   | 30.00                  | 0.00                  |
| 8,820.0               | 87.00           | 90.42       | 8,720.7               | -1.3         | 181.0        | 181.0                   | 30.00                   | 30.00                  | 0.00                  |
| 8,830.0               | 90.00           | 90.42       | 8,721.0               | -1.4         | 191.0        | 191.0                   | 30.00                   | 30.00                  | 0.00                  |
| EOC - Hold to TD      |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,900.0               | 90.00           | 90.42       | 8,721.0               | -1.9         | 261.0        | 261.0                   | 0.00                    | 0.00                   | 0.00                  |
| 9,000.0               | 90.00           | 90.42       | 8,721.0               | -2.6         | 361.0        | 361.0                   | 0.00                    | 0.00                   | 0.00                  |
| 9,100.0               | 90.00           | 90.42       | 8,721.0               | -3.4         | 461.0        | 461.0                   | 0.00                    | 0.00                   | 0.00                  |
| 9,200.0               | 90.00           | 90.42       | 8,721.0               | -4.1         | 561.0        | 561.0                   | 0.00                    | 0.00                   | 0.00                  |
| 9,300.0               | 90.00           | 90.42       | 8,721.0               | -4.8         | 661.0        | 661.0                   | 0.00                    | 0.00                   | 0.00                  |
| 9,400.0               | 90.00           | 90.42       | 8,721.0               | -5.6         | 761.0        | 761.0                   | 0.00                    | 0.00                   | 0.00                  |
| 9,500.0               | 90.00           | 90.42       | 8,721.0               | -6.3         | 861.0        | 861.0                   | 0.00                    | 0.00                   | 0.00                  |
| 9,600.0               | 90.00           | 90.42       | 8,721.0               | -7.0         | 961.0        | 961.0                   | 0.00                    | 0.00                   | 0.00                  |
| 9,700.0               | 90.00           | 90.42       | 8,721.0               | -7.8         | 1,061.0      | 1,061.0                 | 0.00                    | 0.00                   | 0.00                  |
| 9,800.0               | 90.00           | 90.42       | 8,721.0               | -8.5         | 1,161.0      | 1,161.0                 | 0.00                    | 0.00                   | 0.00                  |
| 9,900.0               | 90.00           | 90.42       | 8,721.0               | -9.2         | 1,261.0      | 1,261.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,000.0              | 90.00           | 90.42       | 8,721.0               | -10.0        | 1,361.0      | 1,361.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,100.0              | 90.00           | 90.42       | 8,721.0               | -10.7        | 1,461.0      | 1,461.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,200.0              | 90.00           | 90.42       | 8,721.0               | -11.4        | 1,561.0      | 1,561.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,300.0              | 90.00           | 90.42       | 8,721.0               | -12.2        | 1,661.0      | 1,661.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,400.0              | 90.00           | 90.42       | 8,721.0               | -12.9        | 1,761.0      | 1,761.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,500.0              | 90.00           | 90.42       | 8,721.0               | -13.6        | 1,861.0      | 1,861.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,600.0              | 90.00           | 90.42       | 8,721.0               | -14.4        | 1,961.0      | 1,961.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,700.0              | 90.00           | 90.42       | 8,721.0               | -15.1        | 2,061.0      | 2,061.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,800.0              | 90.00           | 90.42       | 8,721.0               | -15.8        | 2,161.0      | 2,161.0                 | 0.00                    | 0.00                   | 0.00                  |
| 10,900.0              | 90.00           | 90.42       | 8,721.0               | -16.6        | 2,261.0      | 2,261.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,000.0              | 90.00           | 90.42       | 8,721.0               | -17.3        | 2,361.0      | 2,361.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,100.0              | 90.00           | 90.42       | 8,721.0               | -18.0        | 2,461.0      | 2,461.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,200.0              | 90.00           | 90.42       | 8,721.0               | -18.8        | 2,561.0      | 2,561.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,300.0              | 90.00           | 90.42       | 8,721.0               | -19.5        | 2,661.0      | 2,661.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,400.0              | 90.00           | 90.42       | 8,721.0               | -20.2        | 2,761.0      | 2,761.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,500.0              | 90.00           | 90.42       | 8,721.0               | -21.0        | 2,861.0      | 2,861.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,600.0              | 90.00           | 90.42       | 8,721.0               | -21.7        | 2,961.0      | 2,961.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,700.0              | 90.00           | 90.42       | 8,721.0               | -22.4        | 3,061.0      | 3,061.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,800.0              | 90.00           | 90.42       | 8,721.0               | -23.2        | 3,161.0      | 3,161.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,900.0              | 90.00           | 90.42       | 8,721.0               | -23.9        | 3,261.0      | 3,261.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,000.0              | 90.00           | 90.42       | 8,721.0               | -24.6        | 3,361.0      | 3,361.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,100.0              | 90.00           | 90.42       | 8,721.0               | -25.4        | 3,461.0      | 3,461.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,200.0              | 90.00           | 90.42       | 8,721.0               | -26.1        | 3,561.0      | 3,561.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,300.0              | 90.00           | 90.42       | 8,721.0               | -26.8        | 3,661.0      | 3,661.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,400.0              | 90.00           | 90.42       | 8,721.0               | -27.6        | 3,761.0      | 3,761.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,500.0              | 90.00           | 90.42       | 8,721.0               | -28.3        | 3,861.0      | 3,861.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,600.0              | 90.00           | 90.42       | 8,721.0               | -29.0        | 3,961.0      | 3,961.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,700.0              | 90.00           | 90.42       | 8,721.0               | -29.8        | 4,061.0      | 4,061.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,800.0              | 90.00           | 90.42       | 8,721.0               | -30.5        | 4,161.0      | 4,161.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,900.0              | 90.00           | 90.42       | 8,721.0               | -31.2        | 4,261.0      | 4,261.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,000.0              | 90.00           | 90.42       | 8,721.0               | -32.0        | 4,361.0      | 4,361.0                 | 0.00                    | 0.00                   | 0.00                  |



# Great White Directional Services Planning Report



Database: EDM 5000.1 Single User Db  
Company: Cimarex Energy Co.  
Project: Chaves County  
Site: Sec 29 - T15S - R31E  
Well: Nassau State Com #4  
Wellbore: Wellbore #1  
Design: Plan #1

Local Co-ordinate Reference: Well Nassau State Com #4  
TVD Reference: WELL (copy) @ 0.0usft (Original Well Elev)  
MD Reference: WELL (copy) @ 0.0usft (Original Well Elev)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

## Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 13,100.0              | 90.00           | 90.42       | 8,721.0               | -32.7        | 4,460.9      | 4,461.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,200.0              | 90.00           | 90.42       | 8,721.0               | -33.4        | 4,560.9      | 4,561.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,268.7              | 90.00           | 90.42       | 8,721.0               | -33.9        | 4,629.6      | 4,629.7                 | 0.00                    | 0.00                   | 0.00                  |
| TD at 13268.8         |                 |             |                       |              |              |                         |                         |                        |                       |
| 13,268.8              | 90.00           | 90.42       | 8,721.0               | -33.9        | 4,629.6      | 4,629.8                 | 0.00                    | 0.00                   | 0.00                  |
| Nassau #4 - Nassau #3 |                 |             |                       |              |              |                         |                         |                        |                       |

## Design Targets

### Target Name

| - hit/miss target<br>- Shape                                                                                        | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |
|---------------------------------------------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| Nassau #4<br>- plan misses target center by 1.0usft at 13268.8usft MD (8721.0 TVD, -33.9 N, 4629.6 E)<br>- Point    | 0.00          | 0.00         | 8,720.0    | -33.7        | 4,629.6      | 721,131.72      | 693,682.60     | 32° 58' 53.068 N | 103° 50' 11.460 W |
| Nassau #3<br>- plan misses target center by 1319.9usft at 13268.8usft MD (8721.0 TVD, -33.9 N, 4629.6 E)<br>- Point | 0.00          | 0.00         | 8,720.0    | 1,285.9      | 4,611.1      | 722,451.35      | 693,694.02     | 32° 59' 6.125 N  | 103° 50' 11.252 W |

## Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment                    |
|-----------------------|-----------------------|-------------------|--------------|----------------------------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                            |
| 8,530.0               | 8,530.0               | 0.0               | 0.0          | KOP 30/100 DLS @ 90.42 AZI |
| 8,830.0               | 8,721.0               | -1.4              | 191.0        | EOC - Hold to TD           |
| 13,268.7              | 8,721.0               | -33.9             | 4,629.6      | TD at 13268.8              |



Cimarex Energy Co.  
Project: Chaves County  
Site: Sec 29 - T15S - R31E  
Well: Nassau State Com #4  
Wellbore: Wellbore #1

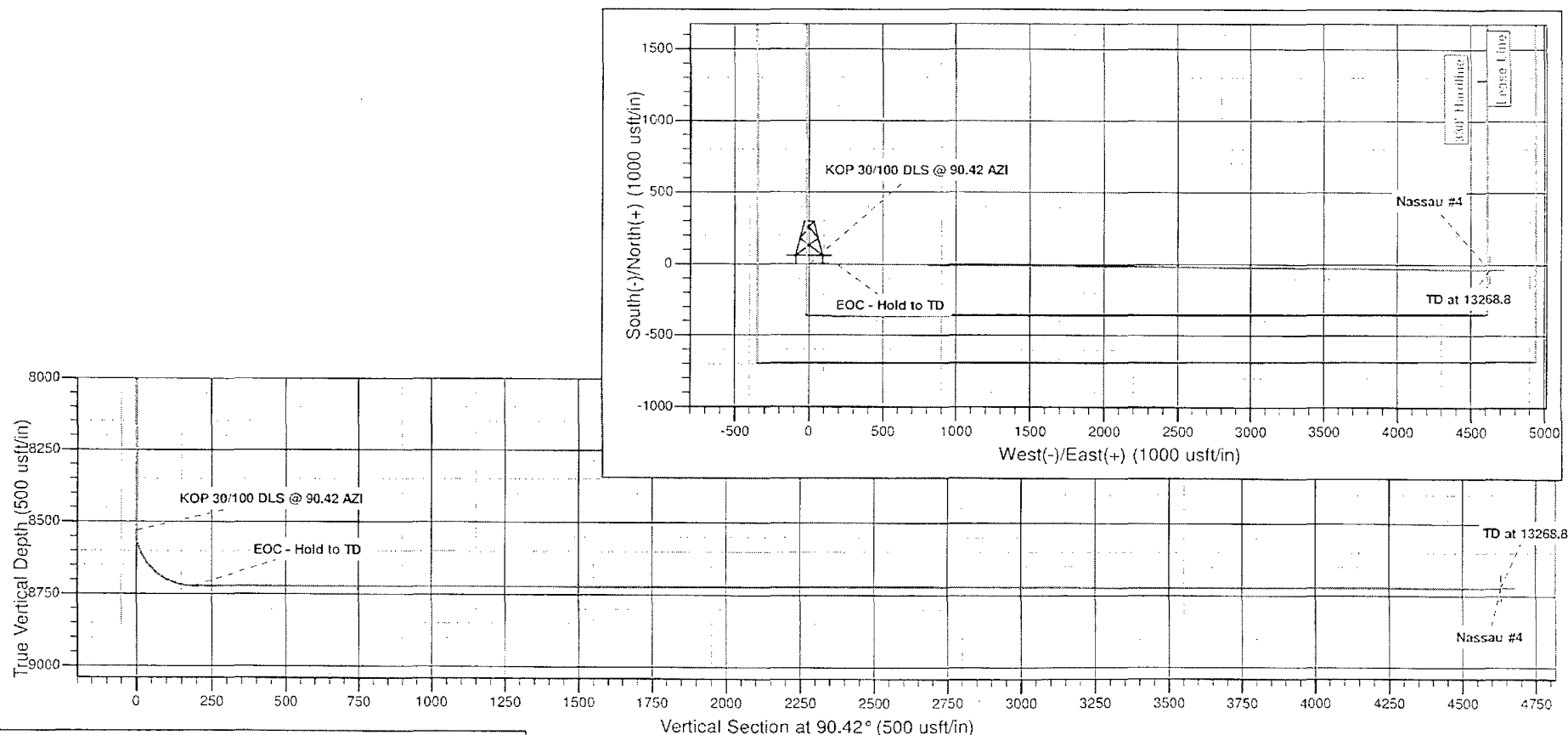
| WELL DETAILS: Nassau State Com #4 |       |           |               |     |           |                  |                  |
|-----------------------------------|-------|-----------|---------------|-----|-----------|------------------|------------------|
| +N/-S                             | +E/-W | Northing  | Ground Level: | 0.0 | Easting   | Latitude         | Longitude        |
| 0.0                               | 0.0   | 721165.40 |               |     | 689052.95 | 32° 58' 53.614 N | 103° 51' 5.808 W |
| SHL: 1830' FSL / 330' FWL         |       |           |               |     |           |                  |                  |
| BHL: 1980' FSL / 330' FEL         |       |           |               |     |           |                  |                  |



|                   |                                    |
|-------------------|------------------------------------|
|                   | Azimuths to Grid North             |
|                   | Total Correction: 7.55°            |
|                   | Magnetic Field Strength: 49146.0nT |
|                   | Dip Angle: 60.87°                  |
| Date: 01/03/2011  |                                    |
| Model: IGRF200510 |                                    |

| DESIGN TARGET DETAILS                                                                    |        |       |        |           |           |                  |                   |
|------------------------------------------------------------------------------------------|--------|-------|--------|-----------|-----------|------------------|-------------------|
| Name                                                                                     | TVD    | +N/-S | +E/-W  | Northing  | Easting   | Latitude         | Longitude         |
| Nassau #4                                                                                | 8720.0 | -33.7 | 4629.7 | 721131.72 | 693682.60 | 32° 58' 53.068 N | 103° 50' 11.460 W |
| - plan misses target center by 1.0usft at 13268.8usft MD (8721.0 TVD, -33.9 N, 4629.6 E) |        |       |        |           |           |                  |                   |

| SECTION DETAILS |         |       |       |       |        |        |           |                            |  |
|-----------------|---------|-------|-------|-------|--------|--------|-----------|----------------------------|--|
| TVD             | MD      | Inc   | Azi   | +N/-S | +E/-W  | VSeet  | Departure | Annotation                 |  |
| 8530.0          | 8530.0  | 0.00  | 0.00  | 0.0   | 0.0    | 0.0    | 0.0       | KOP 30/100 DLS @ 90.42 AZI |  |
| 8721.0          | 8830.0  | 90.00 | 90.42 | -1.4  | 191.0  | 191.0  | 191.0     | EOC - Hold to TD           |  |
| 8721.0          | 13268.7 | 90.00 | 90.42 | -33.9 | 4629.6 | 4629.7 | 4629.7    | TD at 13268.8              |  |



Plan: Plan #1 (Nassau State Com #4/Wellbore #1)

Created By: Aaron Pullin

Date: 14:34, January 03 2011