



# Cimarex Energy Co.

Location Lea County, NM  
Field (State DR) Sec 16, T19S, R32E  
Facility State DR No 7H

Slot No 7H SHL  
Well No 7H  
Wellbore No 7H PWB

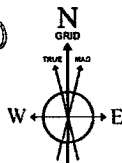


## Well Profile Data

| Design Comment | MD (ft)  | Inc (°) | Az (°)  | TVD (ft) | Local N (ft) | Local E (ft) | DLS (°/100ft) | VS (ft) |
|----------------|----------|---------|---------|----------|--------------|--------------|---------------|---------|
| Tie On         | 0.00     | 0.000   | 179.599 | 0.00     | 0.00         | 0.00         | 0.00          | 0.00    |
| Est KOP        | 9196.00  | 0.000   | 179.599 | 9196.00  | 0.00         | 0.00         | 0.00          | 0.00    |
| End of Curve   | 9514.80  | 89.263  | 179.599 | 9400.61  | -201.99      | 1.41         | 28.00         | 202.00  |
| No 7H PBHL     | 13276.08 | 89.263  | 179.599 | 9449.00  | -3962.87     | 27.70        | 0.00          | 3962.97 |

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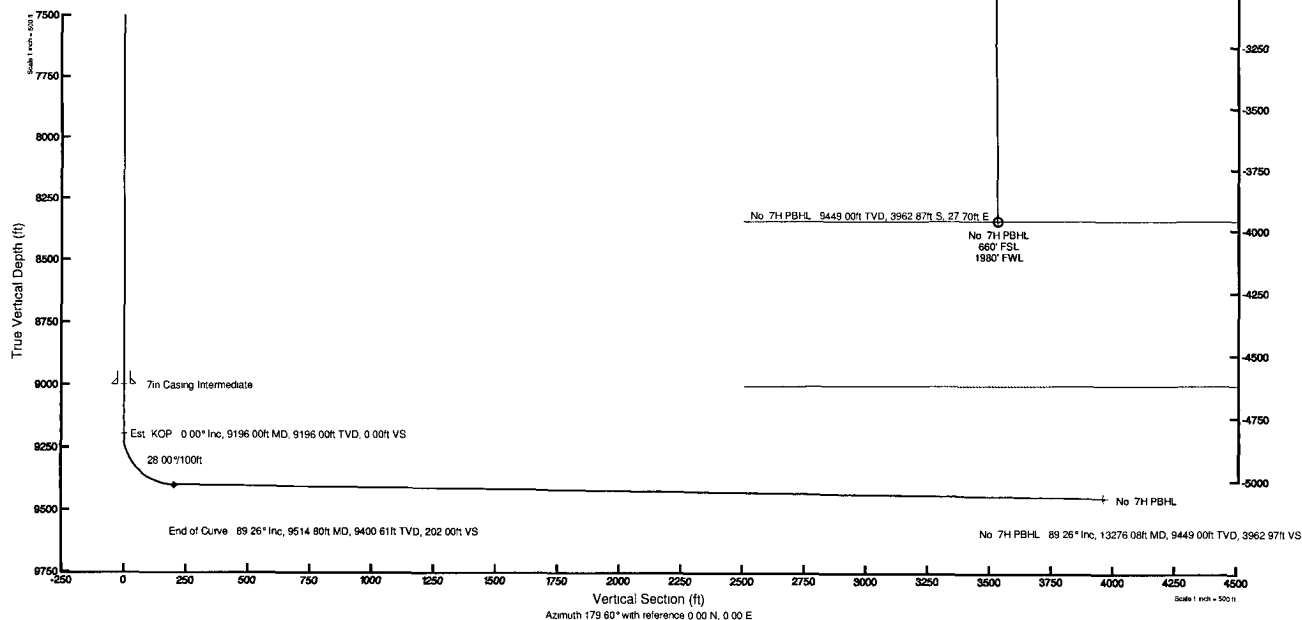
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BGGM (1945 0 to 2011 0) Dip 60 60° Field 49012 5 nT  
Magnetic North is 7.85 degrees East of True North (at 8/9/2010)  
Grid North is 0.30 degrees East of True North  
To correct azimuth from True to Grid subtract 0.30 degrees  
To correct azimuth from Magnetic to Grid add 7.55 degrees

For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.55 = 97.55

|                                                                |                                                                             |
|----------------------------------------------------------------|-----------------------------------------------------------------------------|
| Plot reference wellpath is Profile 2                           | Grid System: NAD83 / TM New Mexico State Planes Eastern Zone (3001) US feet |
| True vertical depths are referenced to Rig on No. 7H SHL (GL)  | North Reference: Grid north                                                 |
| Measured depths are referenced to Rig on No. 7H SHL (GL)       | Scale: True distance                                                        |
| Rig on No. 7H SHL (GL) to Mean Sea Level: 3029 feet            | Depths are in feet                                                          |
| Mean Sea Level to Mud line (Facility State DR No 7H) 3026 feet | Created by: Victor Hernandez on 8/9/2010                                    |
| Coordinates are in feet referenced to SL                       |                                                                             |





# Planned Wellpath Report

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| REFERENCE WELLPATH IDENTIFICATION |                               |          |            |
|-----------------------------------|-------------------------------|----------|------------|
| Operator                          | Cimarex Energy Co.            | Slot     | No. 7H SHL |
| Area                              | Lea County, NM                | Well     | No. 7H     |
| Field                             | (State DR) Sec 16, T19S, R32E | Wellbore | No. 7H PWB |
| Facility                          | State DR No. 7H               |          |            |

| REPORT SETUP INFORMATION |                                                                  |                      |                           |
|--------------------------|------------------------------------------------------------------|----------------------|---------------------------|
| Projection System        | NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet | Software System      | WellArchitect® 2.0        |
| North Reference          | Grid                                                             | User                 | Victor Hernandez          |
| Scale                    | 0.999943                                                         | Report Generated     | 8/9/2010 at 2:01:44 PM    |
| Convergence at slot      | 0.30° East                                                       | Database/Source file | WA_Midland/No. 7H_PWB.xml |

| WELLPATH LOCATION     |                   |          |                  |                |                        |                 |
|-----------------------|-------------------|----------|------------------|----------------|------------------------|-----------------|
|                       | Local coordinates |          | Grid coordinates |                | Geographic coordinates |                 |
|                       | North[ft]         | East[ft] | Easting[USft]    | Northing[USft] | Latitude               | Longitude       |
| Slot Location         | 0.00              | 0.00     | 713649.80        | 606432.30      | 32°39'57.164"N         | 103°46'24.186"W |
| Facility Reference Pt |                   |          | 713649.80        | 606432.30      | 32°39'57.164"N         | 103°46'24.186"W |
| Field Reference Pt    |                   |          | 712327.80        | 606759.10      | 32°40'00.467"N         | 103°46'39.631"W |

| WELLPATH DATUM           |                        |                                          |                   |
|--------------------------|------------------------|------------------------------------------|-------------------|
| Calculation method       | Minimum curvature      | Rig on No. 7H SHL (GL) to GL             | 0.00ft            |
| Horizontal Reference Pt  | SL                     | Rig on No. 7H SHL (GL) to Mean Sea Level | 3626.00ft         |
| Vertical Reference Pt    | Rig on No. 7H SHL (GL) | GL to Mud Line (Facility)                | 0.00ft            |
| MD Reference Pt          | Rig on No. 7H SHL (GL) | Section Origin                           | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level         | Section Azimuth                          | 179.60°           |

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# Planned Wellpath Report

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| REFERENCE WELLPATH IDENTIFICATION |                               |          |            |
|-----------------------------------|-------------------------------|----------|------------|
| Operator                          | Cimarex Energy Co.            | Slot     | No. 7H SHL |
| Area                              | Lea County, NM                | Well     | No. 7H     |
| Field                             | (State DR) Sec 16, T19S, R32E | Wellbore | No. 7H PWB |
| Facility                          | State DR No. 7H               |          |            |

| WELLPATH DATA (44 stations) † = interpolated/extrapolated station |                    |                |             |                   |               |              |                       |                        |                |                 |                  |              |
|-------------------------------------------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|-----------------------|------------------------|----------------|-----------------|------------------|--------------|
| MD<br>[ft]                                                        | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[srv ft] | Grid North<br>[srv ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments     |
| 0.00                                                              | 0.000              | 179.599        | 0.00        | 0.00              | 0.00          | 0.00         | 713649.80             | 606432.30              | 32°39'57.164"N | 103°46'24.186"W | 0.00             | Tie On       |
| 9196.00                                                           | 0.000              | 179.599        | 9196.00     | 0.00              | 0.00          | 0.00         | 713649.80             | 606432.30              | 32°39'57.164"N | 103°46'24.186"W | 0.00             | Est. KOP     |
| 9296.00†                                                          | 28.000             | 179.599        | 9292.07     | 23.95             | -23.95        | 0.17         | 713649.97             | 606408.35              | 32°39'56.927"N | 103°46'24.185"W | 28.00            |              |
| 9396.00†                                                          | 56.000             | 179.599        | 9365.64     | 90.20             | -90.20        | 0.63         | 713650.43             | 606342.11              | 32°39'56.272"N | 103°46'24.184"W | 28.00            |              |
| 9496.00†                                                          | 84.000             | 179.599        | 9399.51     | 183.24            | -183.23       | 1.28         | 713651.08             | 606249.08              | 32°39'55.351"N | 103°46'24.182"W | 28.00            |              |
| 9514.80                                                           | 89.263             | 179.599        | 9400.61     | 202.00            | -201.99       | 1.41         | 713651.21             | 606230.32              | 32°39'55.166"N | 103°46'24.182"W | 28.00            | End of Curve |
| 9596.00†                                                          | 89.263             | 179.599        | 9401.66     | 283.19            | -283.19       | 1.98         | 713651.78             | 606149.13              | 32°39'54.362"N | 103°46'24.180"W | 0.00             |              |
| 9696.00†                                                          | 89.263             | 179.599        | 9402.94     | 383.18            | -383.17       | 2.68         | 713652.48             | 606049.15              | 32°39'53.373"N | 103°46'24.178"W | 0.00             |              |
| 9796.00†                                                          | 89.263             | 179.599        | 9404.23     | 483.18            | -483.16       | 3.38         | 713653.18             | 605949.16              | 32°39'52.384"N | 103°46'24.176"W | 0.00             |              |
| 9896.00†                                                          | 89.263             | 179.599        | 9405.52     | 583.17            | -583.15       | 4.08         | 713653.88             | 605849.18              | 32°39'51.394"N | 103°46'24.174"W | 0.00             |              |
| 9996.00†                                                          | 89.263             | 179.599        | 9406.80     | 683.16            | -683.14       | 4.78         | 713654.58             | 605749.20              | 32°39'50.405"N | 103°46'24.172"W | 0.00             |              |
| 10096.00†                                                         | 89.263             | 179.599        | 9408.09     | 783.15            | -783.13       | 5.47         | 713655.27             | 605649.21              | 32°39'49.416"N | 103°46'24.170"W | 0.00             |              |
| 10196.00†                                                         | 89.263             | 179.599        | 9409.37     | 883.14            | -883.12       | 6.17         | 713655.97             | 605549.23              | 32°39'48.426"N | 103°46'24.168"W | 0.00             |              |
| 10296.00†                                                         | 89.263             | 179.599        | 9410.66     | 983.13            | -983.11       | 6.87         | 713656.67             | 605449.25              | 32°39'47.437"N | 103°46'24.166"W | 0.00             |              |
| 10396.00†                                                         | 89.263             | 179.599        | 9411.95     | 1083.13           | -1083.10      | 7.57         | 713657.37             | 605349.26              | 32°39'46.448"N | 103°46'24.164"W | 0.00             |              |
| 10496.00†                                                         | 89.263             | 179.599        | 9413.23     | 1183.12           | -1183.09      | 8.27         | 713658.07             | 605249.28              | 32°39'45.458"N | 103°46'24.162"W | 0.00             |              |
| 10596.00†                                                         | 89.263             | 179.599        | 9414.52     | 1283.11           | -1283.08      | 8.97         | 713658.77             | 605149.30              | 32°39'44.469"N | 103°46'24.160"W | 0.00             |              |
| 10696.00†                                                         | 89.263             | 179.599        | 9415.81     | 1383.10           | -1383.07      | 9.67         | 713659.47             | 605049.31              | 32°39'43.479"N | 103°46'24.158"W | 0.00             |              |
| 10796.00†                                                         | 89.263             | 179.599        | 9417.09     | 1483.09           | -1483.06      | 10.37        | 713660.17             | 604949.33              | 32°39'42.490"N | 103°46'24.156"W | 0.00             |              |
| 10896.00†                                                         | 89.263             | 179.599        | 9418.38     | 1583.08           | -1583.05      | 11.07        | 713660.87             | 604849.35              | 32°39'41.501"N | 103°46'24.154"W | 0.00             |              |
| 10996.00†                                                         | 89.263             | 179.599        | 9419.67     | 1683.08           | -1683.04      | 11.76        | 713661.56             | 604749.36              | 32°39'40.511"N | 103°46'24.152"W | 0.00             |              |
| 11096.00†                                                         | 89.263             | 179.599        | 9420.95     | 1783.07           | -1783.02      | 12.46        | 713662.26             | 604649.38              | 32°39'39.522"N | 103°46'24.150"W | 0.00             |              |
| 11196.00†                                                         | 89.263             | 179.599        | 9422.24     | 1883.06           | -1883.01      | 13.16        | 713662.96             | 604549.40              | 32°39'38.533"N | 103°46'24.148"W | 0.00             |              |
| 11296.00†                                                         | 89.263             | 179.599        | 9423.53     | 1983.05           | -1983.00      | 13.86        | 713663.66             | 604449.41              | 32°39'37.543"N | 103°46'24.146"W | 0.00             |              |
| 11396.00†                                                         | 89.263             | 179.599        | 9424.81     | 2083.04           | -2082.99      | 14.56        | 713664.36             | 604349.43              | 32°39'36.554"N | 103°46'24.144"W | 0.00             |              |
| 11496.00†                                                         | 89.263             | 179.599        | 9426.10     | 2183.04           | -2182.98      | 15.26        | 713665.06             | 604249.45              | 32°39'35.565"N | 103°46'24.142"W | 0.00             |              |
| 11596.00†                                                         | 89.263             | 179.599        | 9427.39     | 2283.03           | -2282.97      | 15.96        | 713665.76             | 604149.46              | 32°39'34.575"N | 103°46'24.140"W | 0.00             |              |
| 11696.00†                                                         | 89.263             | 179.599        | 9428.67     | 2383.02           | -2382.96      | 16.66        | 713666.46             | 604049.48              | 32°39'33.586"N | 103°46'24.138"W | 0.00             |              |
| 11796.00†                                                         | 89.263             | 179.599        | 9429.96     | 2483.01           | -2482.95      | 17.36        | 713667.16             | 603949.50              | 32°39'32.596"N | 103°46'24.136"W | 0.00             |              |
| 11896.00†                                                         | 89.263             | 179.599        | 9431.25     | 2583.00           | -2582.94      | 18.06        | 713667.85             | 603849.51              | 32°39'31.607"N | 103°46'24.134"W | 0.00             |              |



# Planned Wellpath Report

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| REFERENCE WELLPATH IDENTIFICATION |                               |          |            |
|-----------------------------------|-------------------------------|----------|------------|
| Operator                          | Cimarex Energy Co.            | Slot     | No. 7H SHL |
| Area                              | Lea County, NM                | Well     | No. 7H     |
| Field                             | (State DR) Sec 16, T19S, R32E | Wellbore | No. 7H PWB |
| Facility                          | State DR No. 7H               |          |            |

| WELLPATH DATA (44 stations) † = interpolated/extrapolated station |                    |                |             |                   |               |              |                       |                        |                |                 |                  |             |
|-------------------------------------------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|-----------------------|------------------------|----------------|-----------------|------------------|-------------|
| MD<br>[ft]                                                        | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[srv ft] | Grid North<br>[srv ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments    |
| 11996.00†                                                         | 89.263             | 179.599        | 9432.53     | 2682.99           | -2682.93      | 18.75        | 713668.55             | 603749.53              | 32°39'30.618"N | 103°46'24.132"W | 0.00             |             |
| 12096.00†                                                         | 89.263             | 179.599        | 9433.82     | 2782.99           | -2782.92      | 19.45        | 713669.25             | 603649.55              | 32°39'29.628"N | 103°46'24.130"W | 0.00             |             |
| 12196.00†                                                         | 89.263             | 179.599        | 9435.10     | 2882.98           | -2882.91      | 20.15        | 713669.95             | 603549.56              | 32°39'28.639"N | 103°46'24.128"W | 0.00             |             |
| 12296.00†                                                         | 89.263             | 179.599        | 9436.39     | 2982.97           | -2982.90      | 20.85        | 713670.65             | 603449.58              | 32°39'27.650"N | 103°46'24.126"W | 0.00             |             |
| 12396.00†                                                         | 89.263             | 179.599        | 9437.68     | 3082.96           | -3082.89      | 21.55        | 713671.35             | 603349.60              | 32°39'26.660"N | 103°46'24.124"W | 0.00             |             |
| 12496.00†                                                         | 89.263             | 179.599        | 9438.96     | 3182.95           | -3182.87      | 22.25        | 713672.05             | 603249.61              | 32°39'25.671"N | 103°46'24.122"W | 0.00             |             |
| 12596.00†                                                         | 89.263             | 179.599        | 9440.25     | 3282.94           | -3282.86      | 22.95        | 713672.75             | 603149.63              | 32°39'24.682"N | 103°46'24.120"W | 0.00             |             |
| 12696.00†                                                         | 89.263             | 179.599        | 9441.54     | 3382.94           | -3382.85      | 23.65        | 713673.45             | 603049.65              | 32°39'23.692"N | 103°46'24.118"W | 0.00             |             |
| 12796.00†                                                         | 89.263             | 179.599        | 9442.82     | 3482.93           | -3482.84      | 24.35        | 713674.14             | 602949.66              | 32°39'22.703"N | 103°46'24.116"W | 0.00             |             |
| 12896.00†                                                         | 89.263             | 179.599        | 9444.11     | 3582.92           | -3582.83      | 25.05        | 713674.84             | 602849.68              | 32°39'21.713"N | 103°46'24.114"W | 0.00             |             |
| 12996.00†                                                         | 89.263             | 179.599        | 9445.40     | 3682.91           | -3682.82      | 25.74        | 713675.54             | 602749.70              | 32°39'20.724"N | 103°46'24.112"W | 0.00             |             |
| 13096.00†                                                         | 89.263             | 179.599        | 9446.68     | 3782.90           | -3782.81      | 26.44        | 713676.24             | 602649.71              | 32°39'19.735"N | 103°46'24.110"W | 0.00             |             |
| 13196.00†                                                         | 89.263             | 179.599        | 9447.97     | 3882.89           | -3882.80      | 27.14        | 713676.94             | 602549.73              | 32°39'18.745"N | 103°46'24.108"W | 0.00             |             |
| 13276.08                                                          | 89.263             | 179.599        | 9449.00†    | 3962.97           | -3962.87      | 27.70        | 713677.50             | 602469.66              | 32°39'17.953"N | 103°46'24.106"W | 0.00             | No. 7H PBHL |

| HOLE & CASING SECTIONS Ref Wellbore: No. 7H PWB Ref Wellpath: Prelim_2 |                  |                |                  |                   |                 |                   |                   |                 |                 |
|------------------------------------------------------------------------|------------------|----------------|------------------|-------------------|-----------------|-------------------|-------------------|-----------------|-----------------|
| String/Diameter                                                        | Start MD<br>[ft] | End MD<br>[ft] | Interval<br>[ft] | Start TVD<br>[ft] | End TVD<br>[ft] | Start N/S<br>[ft] | Start E/W<br>[ft] | End N/S<br>[ft] | End E/W<br>[ft] |
| 9.625in Casing Surface                                                 | 0.00             | 4800.00        | 4800.00          | 0.00              | 4800.00         | 0.00              | 0.00              | 0.00            | 0.00            |
| 7in Casing Intermediate                                                | 0.00             | 9000.00        | 9000.00          | 0.00              | 9000.00         | 0.00              | 0.00              | 0.00            | 0.00            |



# Planned Wellpath Report

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| REFERENCE WELLPATH IDENTIFICATION |                               |          |            |
|-----------------------------------|-------------------------------|----------|------------|
| Operator                          | Cimarex Energy Co.            | Slot     | No. 7H SHL |
| Area                              | Lea County, NM                | Well     | No. 7H     |
| Field                             | (State DR) Sec 16, T19S, R32E | Wellbore | No. 7H PWB |
| Facility                          | State DR No. 7H               |          |            |

| TARGETS        |            |             |               |              |                       |                        |                |                 |       |
|----------------|------------|-------------|---------------|--------------|-----------------------|------------------------|----------------|-----------------|-------|
| Name           | MD<br>[ft] | TVD<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[srv ft] | Grid North<br>[srv ft] | Latitude       | Longitude       | Shape |
| 1) No. 7H PBHL | 13276.08   | 9449.00     | -3962.87      | 27.70        | 713677.50             | 602469.66              | 32°39'17.953"N | 103°46'24.106"W | point |

| SURVEY PROGRAM Ref Wellbore: No. 7H PWB Ref Wellpath: Prelim_2 |                |                              |                  |            |
|----------------------------------------------------------------|----------------|------------------------------|------------------|------------|
| Start MD<br>[ft]                                               | End MD<br>[ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore   |
| 0.00                                                           | 13276.08       | NaviTrak (Standard)          |                  | No. 7H PWB |