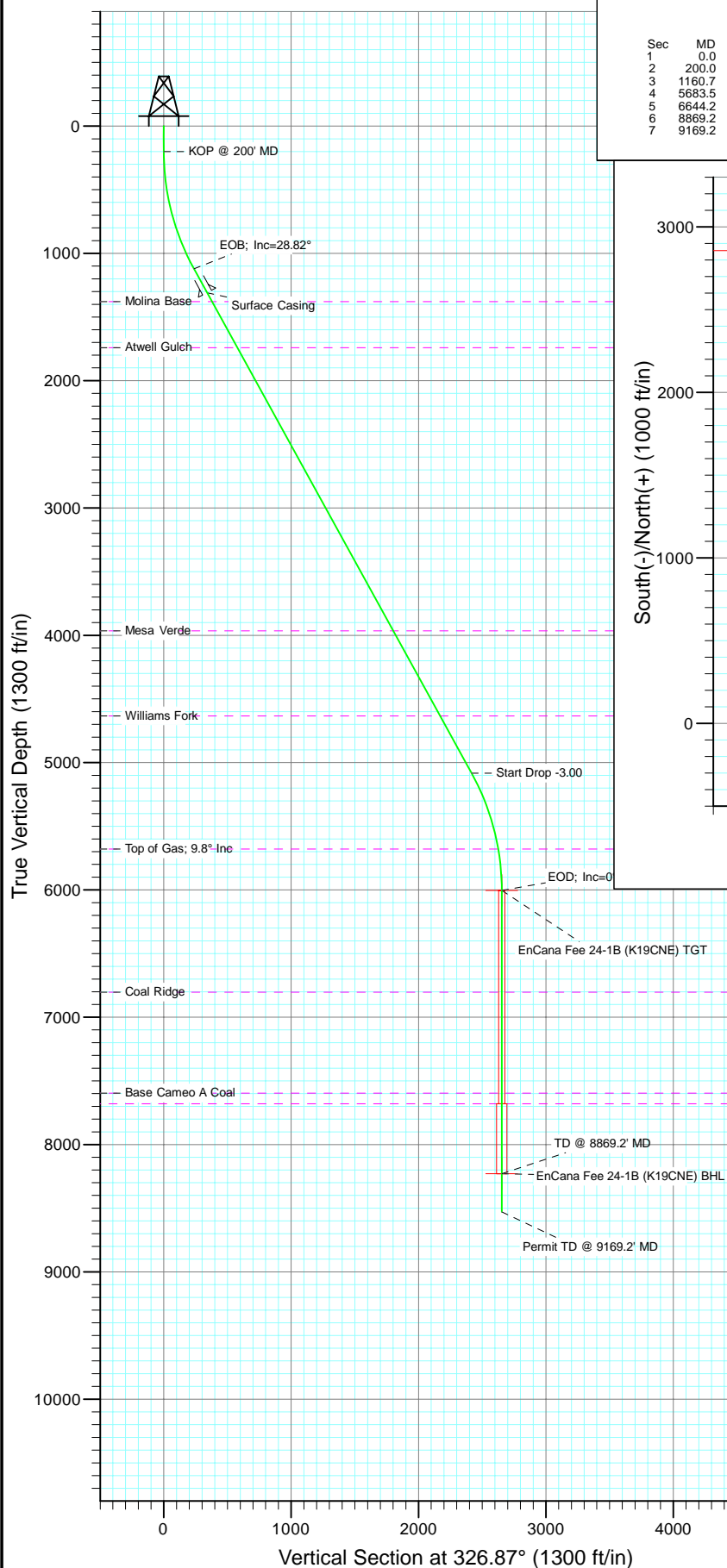
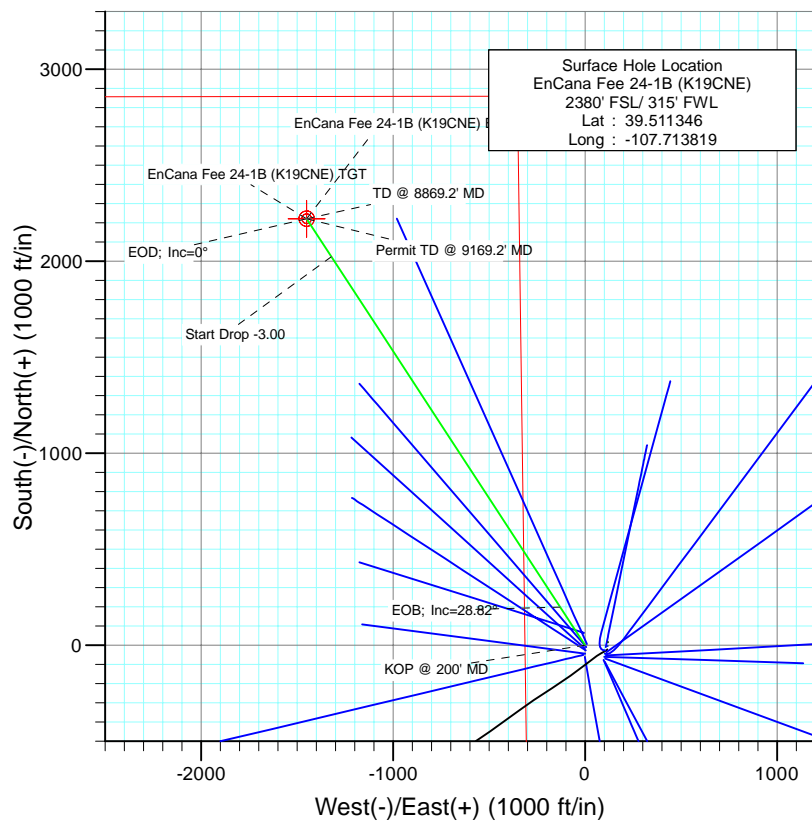




Project: Mamm Creek
Site: SW S19-T6S-R29W (K19CNE Pad)
Well: EnCana Fee 24-1B (K19CNE)
Wellbore: DD
Design: Plan #1



| SECTION DETAILS | | | | | | | | | | |
|-----------------|--------|-------|--------|--------|--------|---------|------|--------|--------|-------------------------------|
| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSec | Target |
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 1160.7 | 28.82 | 326.87 | 1120.7 | 198.1 | -129.3 | 3.00 | 326.87 | 236.6 | |
| 4 | 5683.5 | 28.82 | 326.87 | 5083.3 | 2023.8 | -1321.1 | 0.00 | 0.00 | 2416.8 | |
| 5 | 6644.2 | 0.00 | 0.00 | 6004.0 | 2221.9 | -1450.4 | 3.00 | 180.00 | 2653.4 | EnCana Fee 24-1B (K19CNE) TGT |
| 6 | 8869.2 | 0.00 | 0.00 | 8229.0 | 2221.9 | -1450.4 | 0.00 | 0.00 | 2653.4 | EnCana Fee 24-1B (K19CNE) BHL |
| 7 | 9169.2 | 0.00 | 0.00 | 8529.0 | 2221.9 | -1450.4 | 0.00 | 0.00 | 2653.4 | |



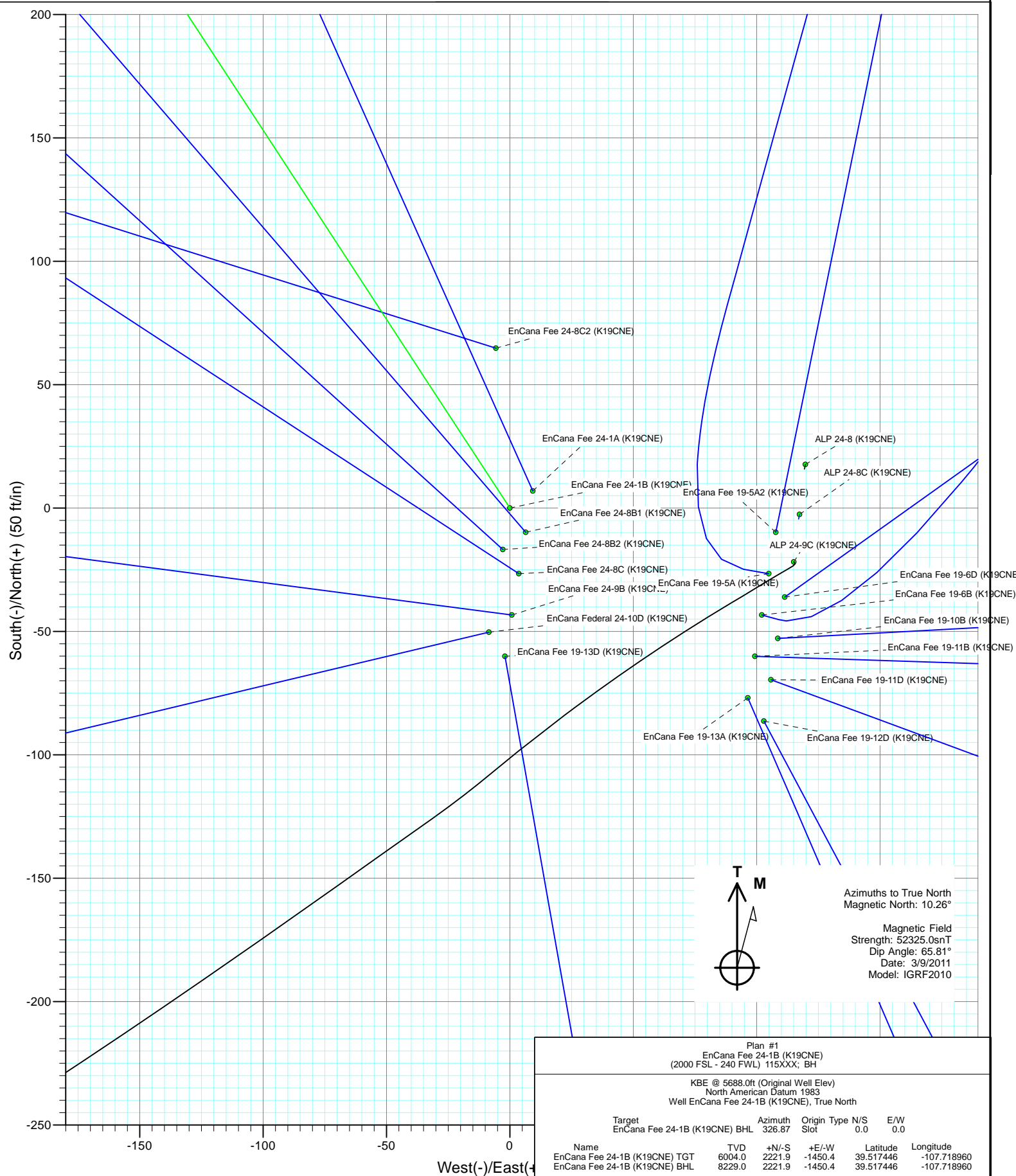
| FORMATION TOP DETAILS | | |
|-----------------------|--------|----------------------|
| TVDPath | MDPath | Formation |
| 1380.0 | 1456.7 | Molina Base |
| 1741.0 | 1868.7 | Atwell Gulch |
| 3965.0 | 4407.1 | Mesa Verde |
| 4633.0 | 5169.5 | Williams Fork |
| 5679.0 | 6317.6 | Top of Gas; 9.8° Inc |
| 6803.0 | 7443.2 | Coal Ridge |
| 7596.0 | 8236.2 | Base Cameo A Coal |
| 7679.0 | 8319.2 | Rollins |



Azimuths to True North
Magnetic North: 10.26°

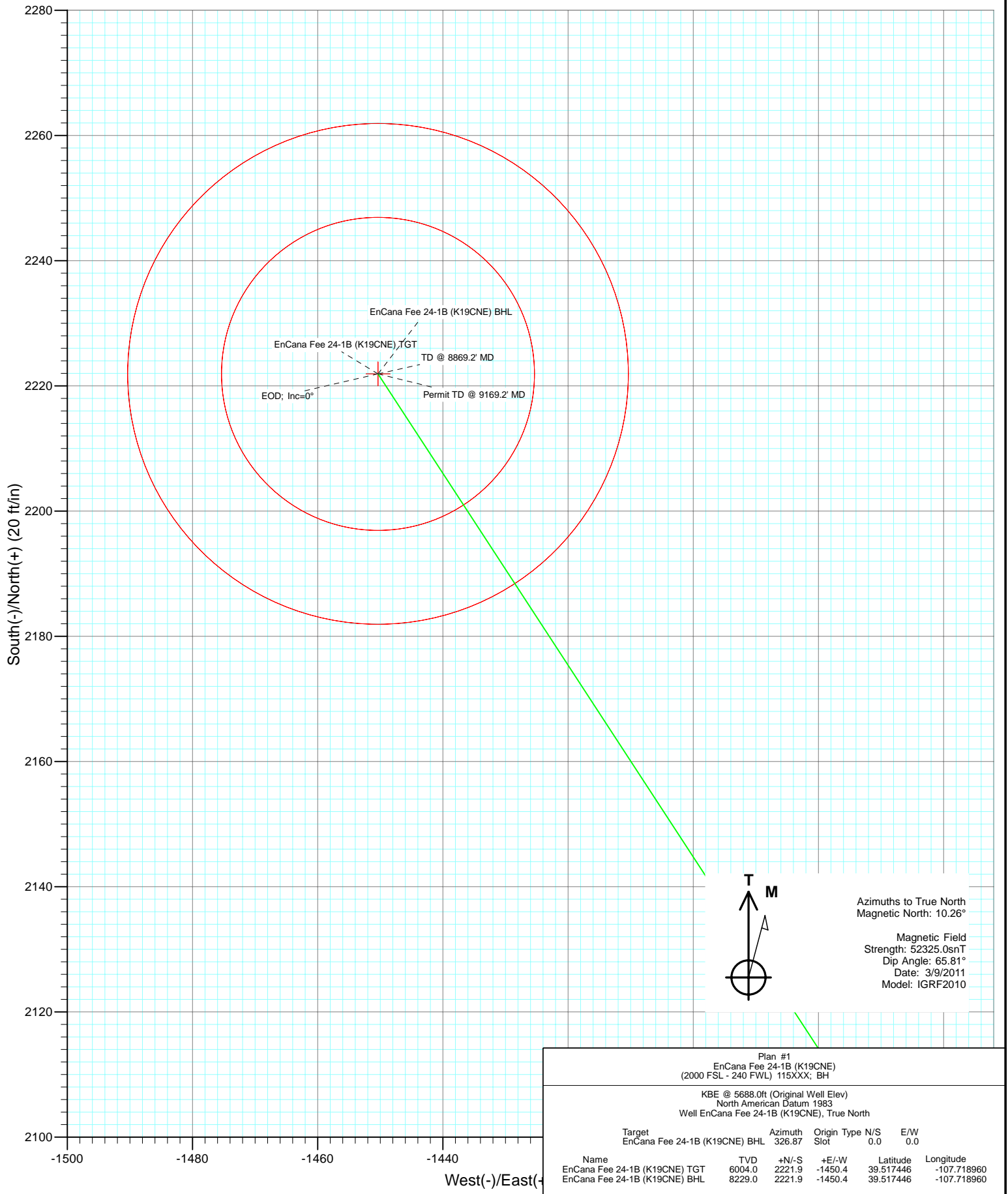
Magnetic Field
Strength: 52325.0snT
Dip Angle: 65.81°
Date: 3/9/2011
Model: IGRF2010

| Plan #1 EnCana Fee 24-1B (K19CNE) (2000 FSL - 240 FWL) 115XXX; BH | | | | | |
|--|---------|--------|---------|-----------|-------------|
| KBE @ 5688.0ft (Original Well Elev) North American Datum 1983 Well EnCana Fee 24-1B (K19CNE), True North | | | | | |
| Target | Azimuth | Origin | Type | N/S | E/W |
| EnCana Fee 24-1B (K19CNE) BHL | 326.87 | Slot | | 0.0 | 0.0 |
| Name | TVD | +N/-S | +E/-W | Latitude | Longitude |
| EnCana Fee 24-1B (K19CNE) TGT | 6004.0 | 2221.9 | -1450.4 | 39.517446 | -107.718960 |
| EnCana Fee 24-1B (K19CNE) BHL | 8229.0 | 2221.9 | -1450.4 | 39.517446 | -107.718960 |





Project: Mamm Creek
 Site: SW S19-T6S-R29W (K19CNE Pad)
 Well: EnCana Fee 24-1B (K19CNE)
 Wellbore: DD
 Design: Plan #1



Azimuths to True North
 Magnetic North: 10.26°
 Magnetic Field
 Strength: 52325.0snT
 Dip Angle: 65.81°
 Date: 3/9/2011
 Model: IGRF2010

| | | | | | | |
|--|---------|--------|---------|-----------|-------------|--|
| Plan #1 | | | | | | |
| EnCana Fee 24-1B (K19CNE) | | | | | | |
| (2000 FSL - 240 FWL) 115XXX; BH | | | | | | |
| KBE @ 5688.0ft (Original Well Elev) | | | | | | |
| North American Datum 1983 | | | | | | |
| Well EnCana Fee 24-1B (K19CNE), True North | | | | | | |
| Target | Azimuth | Origin | Type | N/S | E/W | |
| EnCana Fee 24-1B (K19CNE) BHL | 326.87 | Slot | | 0.0 | 0.0 | |
| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | |
| EnCana Fee 24-1B (K19CNE) TGT | 6004.0 | 2221.9 | -1450.4 | 39.517446 | -107.718960 | |
| EnCana Fee 24-1B (K19CNE) BHL | 8229.0 | 2221.9 | -1450.4 | 39.517446 | -107.718960 | |

Cathedral Energy Services

Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM 5000.1 US Multi Users DB | Local Co-ordinate Reference: | Well EnCana Fee 24-1B (K19CNE) |
| Company: | EnCana Oil & Gas (USA) Inc | TVD Reference: | KBE @ 5688.0ft (Original Well Elev) |
| Project: | Mamm Creek | MD Reference: | KBE @ 5688.0ft (Original Well Elev) |
| Site: | SW S19-T6S-R29W (K19CNE Pad) | North Reference: | True |
| Well: | EnCana Fee 24-1B (K19CNE) | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | DD | | |
| Design: | Plan #1 | | |

| | | | |
|-------------|---------------------------|---------------|----------------|
| Project | Mamm Creek | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Central Zone | | |

| Site | | SW S19-T6S-R29W (K19CNE Pad) | | | |
|-----------------------|----------|------------------------------|-----------------|-------------------|-------------|
| Site Position: | | Northing: | 1,618,725.17 ft | Latitude: | 39.511286 |
| From: | Lat/Long | Easting: | 2,375,576.53 ft | Longitude: | -107.713411 |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 0.000 in | Grid Convergence: | -1.40 ° |

| | | | | | | |
|----------------------|---------------------------|--------|---------------------|-----------------|---------------|-------------|
| Well | EnCana Fee 24-1B (K19CNE) | | | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,618,749.77 ft | Latitude: | 39.511346 |
| | +E/-W | 0.0 ft | Easting: | 2,375,462.02 ft | Longitude: | -107.713819 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 5,666.0 ft |

| | | | | | |
|-----------|------------|-------------|--------------------|------------------|------------------------|
| Wellbore | DD | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 3/9/2011 | 10.26 | 65.81 | 52,325 |

| | | | | |
|-------------------|--------------------------|---------------|---------------|------------------|
| Design | Plan #1 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
| | 0.0 | 0.0 | 0.0 | 326.87 |

| Plan Sections | | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|---------------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,160.7 | 28.82 | 326.87 | 1,120.7 | 198.1 | -129.3 | 3.00 | 3.00 | 0.00 | 326.87 | |
| 5,683.5 | 28.82 | 326.87 | 5,083.3 | 2,023.8 | -1,321.1 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,644.2 | 0.00 | 0.00 | 6,004.0 | 2,221.9 | -1,450.4 | 3.00 | -3.00 | 0.00 | 180.00 | EnCana Fee 24-1B (K19CNE) |
| 8,869.2 | 0.00 | 0.00 | 8,229.0 | 2,221.9 | -1,450.4 | 0.00 | 0.00 | 0.00 | 0.00 | EnCana Fee 24-1B (K19CNE) |
| 9,169.2 | 0.00 | 0.00 | 8,529.0 | 2,221.9 | -1,450.4 | 0.00 | 0.00 | 0.00 | 0.00 | |

Cathedral Energy Services

Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM 5000.1 US Multi Users DB | Local Co-ordinate Reference: | Well EnCana Fee 24-1B (K19CNE) |
| Company: | EnCana Oil & Gas (USA) Inc | TVD Reference: | KBE @ 5688.0ft (Original Well Elev) |
| Project: | Mamm Creek | MD Reference: | KBE @ 5688.0ft (Original Well Elev) |
| Site: | SW S19-T6S-R29W (K19CNE Pad) | North Reference: | True |
| Well: | EnCana Fee 24-1B (K19CNE) | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | DD | | |
| Design: | Plan #1 | | |

Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | KOP @ 200' MD |
| 300.0 | 3.00 | 326.87 | 300.0 | 2.2 | -1.4 | 2.6 | 3.00 | 3.00 | |
| 400.0 | 6.00 | 326.87 | 399.6 | 8.8 | -5.7 | 10.5 | 3.00 | 3.00 | |
| 500.0 | 9.00 | 326.87 | 498.8 | 19.7 | -12.9 | 23.5 | 3.00 | 3.00 | |
| 600.0 | 12.00 | 326.87 | 597.1 | 34.9 | -22.8 | 41.7 | 3.00 | 3.00 | |
| 700.0 | 15.00 | 326.87 | 694.3 | 54.5 | -35.6 | 65.1 | 3.00 | 3.00 | |
| 800.0 | 18.00 | 326.87 | 790.2 | 78.3 | -51.1 | 93.5 | 3.00 | 3.00 | |
| 900.0 | 21.00 | 326.87 | 884.4 | 106.2 | -69.3 | 126.9 | 3.00 | 3.00 | |
| 1,000.0 | 24.00 | 326.87 | 976.8 | 138.3 | -90.3 | 165.1 | 3.00 | 3.00 | |
| 1,100.0 | 27.00 | 326.87 | 1,067.1 | 174.3 | -113.8 | 208.2 | 3.00 | 3.00 | |
| 1,160.7 | 28.82 | 326.87 | 1,120.7 | 198.1 | -129.3 | 236.6 | 3.00 | 3.00 | EOB; Inc=28.82° |
| 1,200.0 | 28.82 | 326.87 | 1,155.1 | 214.0 | -139.7 | 255.5 | 0.00 | 0.00 | |
| 1,300.0 | 28.82 | 326.87 | 1,242.7 | 254.3 | -166.0 | 303.7 | 0.00 | 0.00 | |
| 1,375.4 | 28.82 | 326.87 | 1,308.8 | 284.8 | -185.9 | 340.1 | 0.00 | 0.00 | Surface Casing |
| 1,400.0 | 28.82 | 326.87 | 1,330.4 | 294.7 | -192.4 | 351.9 | 0.00 | 0.00 | |
| 1,456.7 | 28.82 | 326.87 | 1,380.0 | 317.6 | -207.3 | 379.2 | 0.00 | 0.00 | Molina Base |
| 1,500.0 | 28.82 | 326.87 | 1,418.0 | 335.1 | -218.7 | 400.1 | 0.00 | 0.00 | |
| 1,600.0 | 28.82 | 326.87 | 1,505.6 | 375.4 | -245.1 | 448.3 | 0.00 | 0.00 | |
| 1,700.0 | 28.82 | 326.87 | 1,593.2 | 415.8 | -271.4 | 496.5 | 0.00 | 0.00 | |
| 1,800.0 | 28.82 | 326.87 | 1,680.8 | 456.2 | -297.8 | 544.8 | 0.00 | 0.00 | |
| 1,868.7 | 28.82 | 326.87 | 1,741.0 | 483.9 | -315.9 | 577.9 | 0.00 | 0.00 | Atwell Gulch |
| 1,900.0 | 28.82 | 326.87 | 1,768.4 | 496.5 | -324.1 | 593.0 | 0.00 | 0.00 | |
| 2,000.0 | 28.82 | 326.87 | 1,856.0 | 536.9 | -350.5 | 641.2 | 0.00 | 0.00 | |
| 2,100.0 | 28.82 | 326.87 | 1,943.7 | 577.3 | -376.8 | 689.4 | 0.00 | 0.00 | |
| 2,200.0 | 28.82 | 326.87 | 2,031.3 | 617.6 | -403.2 | 737.6 | 0.00 | 0.00 | |
| 2,300.0 | 28.82 | 326.87 | 2,118.9 | 658.0 | -429.5 | 785.8 | 0.00 | 0.00 | |
| 2,400.0 | 28.82 | 326.87 | 2,206.5 | 698.4 | -455.9 | 834.0 | 0.00 | 0.00 | |
| 2,500.0 | 28.82 | 326.87 | 2,294.1 | 738.7 | -482.2 | 882.2 | 0.00 | 0.00 | |
| 2,600.0 | 28.82 | 326.87 | 2,381.7 | 779.1 | -508.6 | 930.4 | 0.00 | 0.00 | |
| 2,700.0 | 28.82 | 326.87 | 2,469.3 | 819.5 | -534.9 | 978.6 | 0.00 | 0.00 | |
| 2,800.0 | 28.82 | 326.87 | 2,557.0 | 859.8 | -561.3 | 1,026.8 | 0.00 | 0.00 | |
| 2,900.0 | 28.82 | 326.87 | 2,644.6 | 900.2 | -587.6 | 1,075.0 | 0.00 | 0.00 | |
| 3,000.0 | 28.82 | 326.87 | 2,732.2 | 940.6 | -614.0 | 1,123.2 | 0.00 | 0.00 | |
| 3,100.0 | 28.82 | 326.87 | 2,819.8 | 980.9 | -640.3 | 1,171.4 | 0.00 | 0.00 | |
| 3,200.0 | 28.82 | 326.87 | 2,907.4 | 1,021.3 | -666.7 | 1,219.6 | 0.00 | 0.00 | |
| 3,300.0 | 28.82 | 326.87 | 2,995.0 | 1,061.7 | -693.0 | 1,267.8 | 0.00 | 0.00 | |
| 3,400.0 | 28.82 | 326.87 | 3,082.6 | 1,102.0 | -719.4 | 1,316.0 | 0.00 | 0.00 | |
| 3,500.0 | 28.82 | 326.87 | 3,170.3 | 1,142.4 | -745.7 | 1,364.2 | 0.00 | 0.00 | |
| 3,600.0 | 28.82 | 326.87 | 3,257.9 | 1,182.8 | -772.1 | 1,412.5 | 0.00 | 0.00 | |
| 3,700.0 | 28.82 | 326.87 | 3,345.5 | 1,223.1 | -798.4 | 1,460.7 | 0.00 | 0.00 | |
| 3,800.0 | 28.82 | 326.87 | 3,433.1 | 1,263.5 | -824.8 | 1,508.9 | 0.00 | 0.00 | |
| 3,900.0 | 28.82 | 326.87 | 3,520.7 | 1,303.9 | -851.1 | 1,557.1 | 0.00 | 0.00 | |
| 4,000.0 | 28.82 | 326.87 | 3,608.3 | 1,344.2 | -877.4 | 1,605.3 | 0.00 | 0.00 | |
| 4,100.0 | 28.82 | 326.87 | 3,695.9 | 1,384.6 | -903.8 | 1,653.5 | 0.00 | 0.00 | |
| 4,200.0 | 28.82 | 326.87 | 3,783.5 | 1,425.0 | -930.1 | 1,701.7 | 0.00 | 0.00 | |
| 4,300.0 | 28.82 | 326.87 | 3,871.2 | 1,465.3 | -956.5 | 1,749.9 | 0.00 | 0.00 | |
| 4,400.0 | 28.82 | 326.87 | 3,958.8 | 1,505.7 | -982.8 | 1,798.1 | 0.00 | 0.00 | |
| 4,407.1 | 28.82 | 326.87 | 3,965.0 | 1,508.6 | -984.7 | 1,801.5 | 0.00 | 0.00 | Mesa Verde |
| 4,500.0 | 28.82 | 326.87 | 4,046.4 | 1,546.1 | -1,009.2 | 1,846.3 | 0.00 | 0.00 | |
| 4,600.0 | 28.82 | 326.87 | 4,134.0 | 1,586.4 | -1,035.5 | 1,894.5 | 0.00 | 0.00 | |

Cathedral Energy Services

Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM 5000.1 US Multi Users DB | Local Co-ordinate Reference: | Well EnCana Fee 24-1B (K19CNE) |
| Company: | EnCana Oil & Gas (USA) Inc | TVD Reference: | KBE @ 5688.0ft (Original Well Elev) |
| Project: | Mamm Creek | MD Reference: | KBE @ 5688.0ft (Original Well Elev) |
| Site: | SW S19-T6S-R29W (K19CNE Pad) | North Reference: | True |
| Well: | EnCana Fee 24-1B (K19CNE) | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | DD | | |
| Design: | Plan #1 | | |

| Planned Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
| 4,700.0 | 28.82 | 326.87 | 4,221.6 | 1,626.8 | -1,061.9 | 1,942.7 | 0.00 | 0.00 | |
| 4,800.0 | 28.82 | 326.87 | 4,309.2 | 1,667.2 | -1,088.2 | 1,990.9 | 0.00 | 0.00 | |
| 4,900.0 | 28.82 | 326.87 | 4,396.8 | 1,707.5 | -1,114.6 | 2,039.1 | 0.00 | 0.00 | |
| 5,000.0 | 28.82 | 326.87 | 4,484.5 | 1,747.9 | -1,140.9 | 2,087.3 | 0.00 | 0.00 | |
| 5,100.0 | 28.82 | 326.87 | 4,572.1 | 1,788.3 | -1,167.3 | 2,135.5 | 0.00 | 0.00 | |
| 5,169.5 | 28.82 | 326.87 | 4,633.0 | 1,816.4 | -1,185.6 | 2,169.1 | 0.00 | 0.00 | Williams Fork |
| 5,200.0 | 28.82 | 326.87 | 4,659.7 | 1,828.6 | -1,193.6 | 2,183.7 | 0.00 | 0.00 | |
| 5,300.0 | 28.82 | 326.87 | 4,747.3 | 1,869.0 | -1,220.0 | 2,231.9 | 0.00 | 0.00 | |
| 5,400.0 | 28.82 | 326.87 | 4,834.9 | 1,909.4 | -1,246.3 | 2,280.2 | 0.00 | 0.00 | |
| 5,500.0 | 28.82 | 326.87 | 4,922.5 | 1,949.7 | -1,272.7 | 2,328.4 | 0.00 | 0.00 | |
| 5,600.0 | 28.82 | 326.87 | 5,010.1 | 1,990.1 | -1,299.0 | 2,376.6 | 0.00 | 0.00 | |
| 5,683.5 | 28.82 | 326.87 | 5,083.3 | 2,023.8 | -1,321.1 | 2,416.8 | 0.00 | 0.00 | Start Drop -3.00 |
| 5,700.0 | 28.33 | 326.87 | 5,097.8 | 2,030.4 | -1,325.4 | 2,424.7 | 3.00 | -3.00 | |
| 5,800.0 | 25.33 | 326.87 | 5,187.0 | 2,068.2 | -1,350.0 | 2,469.8 | 3.00 | -3.00 | |
| 5,900.0 | 22.33 | 326.87 | 5,278.5 | 2,102.0 | -1,372.1 | 2,510.2 | 3.00 | -3.00 | |
| 6,000.0 | 19.33 | 326.87 | 5,371.9 | 2,131.8 | -1,391.5 | 2,545.8 | 3.00 | -3.00 | |
| 6,100.0 | 16.33 | 326.87 | 5,467.1 | 2,157.4 | -1,408.3 | 2,576.4 | 3.00 | -3.00 | |
| 6,200.0 | 13.33 | 326.87 | 5,563.8 | 2,178.9 | -1,422.2 | 2,602.0 | 3.00 | -3.00 | |
| 6,300.0 | 10.33 | 326.87 | 5,661.7 | 2,196.0 | -1,433.4 | 2,622.5 | 3.00 | -3.00 | |
| 6,317.6 | 9.80 | 326.87 | 5,679.0 | 2,198.6 | -1,435.1 | 2,625.5 | 3.00 | -3.00 | Top of Gas; 9.8° Inc |
| 6,400.0 | 7.33 | 326.87 | 5,760.5 | 2,208.9 | -1,441.8 | 2,637.8 | 3.00 | -3.00 | |
| 6,500.0 | 4.33 | 326.87 | 5,859.9 | 2,217.4 | -1,447.4 | 2,648.0 | 3.00 | -3.00 | |
| 6,600.0 | 1.33 | 326.87 | 5,959.8 | 2,221.5 | -1,450.1 | 2,652.9 | 3.00 | -3.00 | |
| 6,644.2 | 0.00 | 0.00 | 6,004.0 | 2,221.9 | -1,450.4 | 2,653.4 | 3.00 | -3.00 | EOD; Inc=0° - EnCana Fee 24-1B (K19CNE) T |
| 6,700.0 | 0.00 | 0.00 | 6,059.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 6,800.0 | 0.00 | 0.00 | 6,159.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 6,900.0 | 0.00 | 0.00 | 6,259.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,000.0 | 0.00 | 0.00 | 6,359.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,100.0 | 0.00 | 0.00 | 6,459.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,200.0 | 0.00 | 0.00 | 6,559.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,300.0 | 0.00 | 0.00 | 6,659.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,400.0 | 0.00 | 0.00 | 6,759.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,443.2 | 0.00 | 0.00 | 6,803.0 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | Coal Ridge |
| 7,500.0 | 0.00 | 0.00 | 6,859.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,600.0 | 0.00 | 0.00 | 6,959.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,700.0 | 0.00 | 0.00 | 7,059.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,800.0 | 0.00 | 0.00 | 7,159.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 7,900.0 | 0.00 | 0.00 | 7,259.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,000.0 | 0.00 | 0.00 | 7,359.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,100.0 | 0.00 | 0.00 | 7,459.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,200.0 | 0.00 | 0.00 | 7,559.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,236.2 | 0.00 | 0.00 | 7,596.0 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | Base Cameo A Coal |
| 8,300.0 | 0.00 | 0.00 | 7,659.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,319.2 | 0.00 | 0.00 | 7,679.0 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | Rollins |
| 8,400.0 | 0.00 | 0.00 | 7,759.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,500.0 | 0.00 | 0.00 | 7,859.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,600.0 | 0.00 | 0.00 | 7,959.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,700.0 | 0.00 | 0.00 | 8,059.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,800.0 | 0.00 | 0.00 | 8,159.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 8,869.2 | 0.00 | 0.00 | 8,229.0 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | TD @ 8869.2' MD - EnCana Fee 24-1B (K19CNE) |
| 8,900.0 | 0.00 | 0.00 | 8,259.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 9,000.0 | 0.00 | 0.00 | 8,359.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |

Cathedral Energy Services

Planning Report

| | | | |
|------------------|------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM 5000.1 US Multi Users DB | Local Co-ordinate Reference: | Well EnCana Fee 24-1B (K19CNE) |
| Company: | EnCana Oil & Gas (USA) Inc | TVD Reference: | KBE @ 5688.0ft (Original Well Elev) |
| Project: | Mamm Creek | MD Reference: | KBE @ 5688.0ft (Original Well Elev) |
| Site: | SW S19-T6S-R29W (K19CNE Pad) | North Reference: | True |
| Well: | EnCana Fee 24-1B (K19CNE) | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | DD | | |
| Design: | Plan #1 | | |

| Planned Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|------------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
| 9,100.0 | 0.00 | 0.00 | 8,459.8 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | |
| 9,169.2 | 0.00 | 0.00 | 8,529.0 | 2,221.9 | -1,450.4 | 2,653.4 | 0.00 | 0.00 | Permit TD @ 9169.2' MD |

| Targets | | | | | | | | | | |
|--|-----------|----------|---------|---------|----------|--------------|--------------|-----------|-------------|--|
| Target Name | | | | | | | | | | |
| - hit/miss target | Dip Angle | Dip Dir. | TVD | +N/-S | +E/-W | Northing | Easting | | | |
| - Shape | (°) | (°) | (ft) | (ft) | (ft) | (ft) | (ft) | Latitude | Longitude | |
| EnCana Fee 24-1B (K19CNE) - plan hits target center - Circle (radius 40.0) | 0.00 | 0.00 | 8,229.0 | 2,221.9 | -1,450.4 | 1,621,006.38 | 2,374,066.23 | 39.517446 | -107.718960 | |
| EnCana Fee 24-1B (K19CNE) - plan hits target center - Circle (radius 25.0) | 0.00 | 0.00 | 6,004.0 | 2,221.9 | -1,450.4 | 1,621,006.38 | 2,374,066.23 | 39.517446 | -107.718960 | |

| Casing Points | | | | | | | |
|---------------------|---------------------|----------------|--|--|--|----------------------|--------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | | | | Casing Diameter (in) | Hole Diameter (in) |
| 1,375.4 | 1,308.8 | Surface Casing | | | | 0.000 | 0.000 |

| Formations | | | | | | |
|---------------------|---------------------|----------------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 1,456.7 | 1,380.0 | Molina Base | | 0.00 | | |
| 1,868.7 | 1,741.0 | Atwell Gulch | | 0.00 | | |
| 4,407.1 | 3,965.0 | Mesa Verde | | 0.00 | | |
| 5,169.5 | 4,633.0 | Williams Fork | | 0.00 | | |
| 6,317.6 | 5,679.0 | Top of Gas; 9.8° Inc | | 0.00 | | |
| 7,443.2 | 6,803.0 | Coal Ridge | | 0.00 | | |
| 8,236.2 | 7,596.0 | Base Cameo A Coal | | 0.00 | | |
| 8,319.2 | 7,679.0 | Rollins | | 0.00 | | |

| Plan Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | | |
| | | +N/-S (ft) | +E/-W (ft) | Comment | |
| 200.0 | 200.0 | 0.0 | 0.0 | KOP @ 200' MD | |
| 1,160.7 | 1,120.7 | 198.1 | -129.3 | EOB; Inc=28.82° | |
| 5,683.5 | 5,083.3 | 2,023.8 | -1,321.1 | Start Drop -3.00 | |
| 6,644.2 | 6,004.0 | 2,221.9 | -1,450.4 | EOD; Inc=0° | |
| 8,869.2 | 8,229.0 | 2,221.9 | -1,450.4 | TD @ 8869.2' MD | |
| 9,169.2 | 8,529.0 | 2,221.9 | -1,450.4 | Permit TD @ 9169.2' MD | |