

BISON OIL & GAS II, LLC

WELD COUNTY, COLORADO (NAD 83)

SE SE SEC. 11 T5N R61W 6th P.M.

GROTHER 5-61 11B-14-23-1

ORIGINAL WELLBORE

26 April, 2022

Plan: PROPOSAL #2





Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE SE SEC. 11 T5N R61W 6th P.M.
Well: GROTHEER 5-61 11B-14-23-1
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Vsect | Dep | Annotation |
|----------|-------|--------|---------|-----------|----------|----------|----------|---------------------------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | SHL: 460ft FSL & 1182ft FEL of Sec 11 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | START NUDGE (2°/100ft BUR) |
| 1550.14 | 19.00 | 254.47 | 1532.82 | -41.80 | -150.42 | 60.24 | 156.12 | EOB TO 19° INC |
| 4695.67 | 19.00 | 254.47 | 4506.92 | -316.03 | -1137.26 | 455.42 | 1180.35 | END OF TANGENT |
| 5645.81 | 0.00 | 0.00 | 5439.74 | -357.83 | -1287.68 | 515.66 | 1336.48 | EOD TO VERTICAL |
| 5745.81 | 0.00 | 0.00 | 5539.74 | -357.83 | -1287.68 | 515.66 | 1336.48 | KOP (10°/100ft BUR) |
| 6645.81 | 90.00 | 180.34 | 6112.70 | -930.78 | -1291.09 | 1084.56 | 1909.43 | BPI: 460ft FNL & 2465ft FEL of Sec 14 |
| 16351.58 | 90.00 | 180.35 | 6112.70 | -10636.37 | -1349.26 | 10721.60 | 11615.20 | EPI: 460ft FSL & 2451ft FEL of Sec 23 |
| 16451.77 | 90.00 | 180.30 | 6112.70 | -10736.56 | -1349.83 | 10821.08 | 11715.39 | BHL: 360ft FSL & 2451ft FEL of Sec 23 |

PROPOSED LOCAL COORDINATES:

SHL: 460ft FSL & 1182ft FEL Sec 11

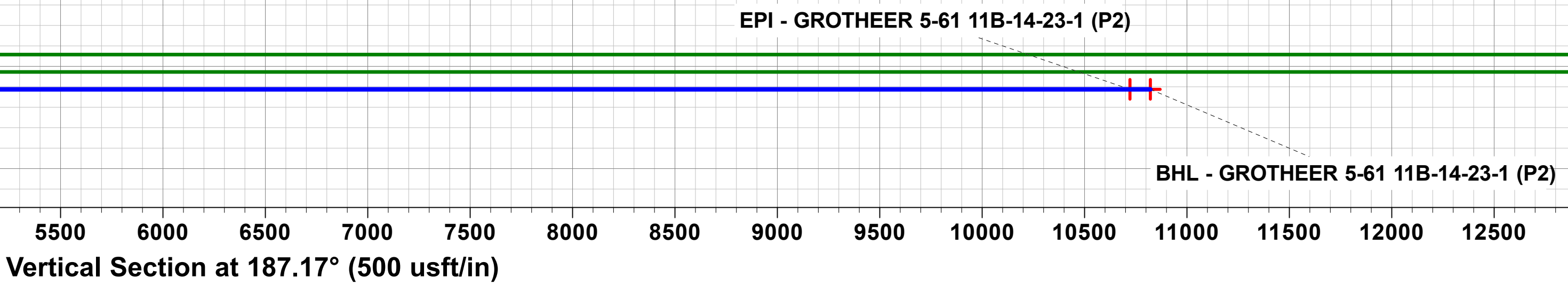
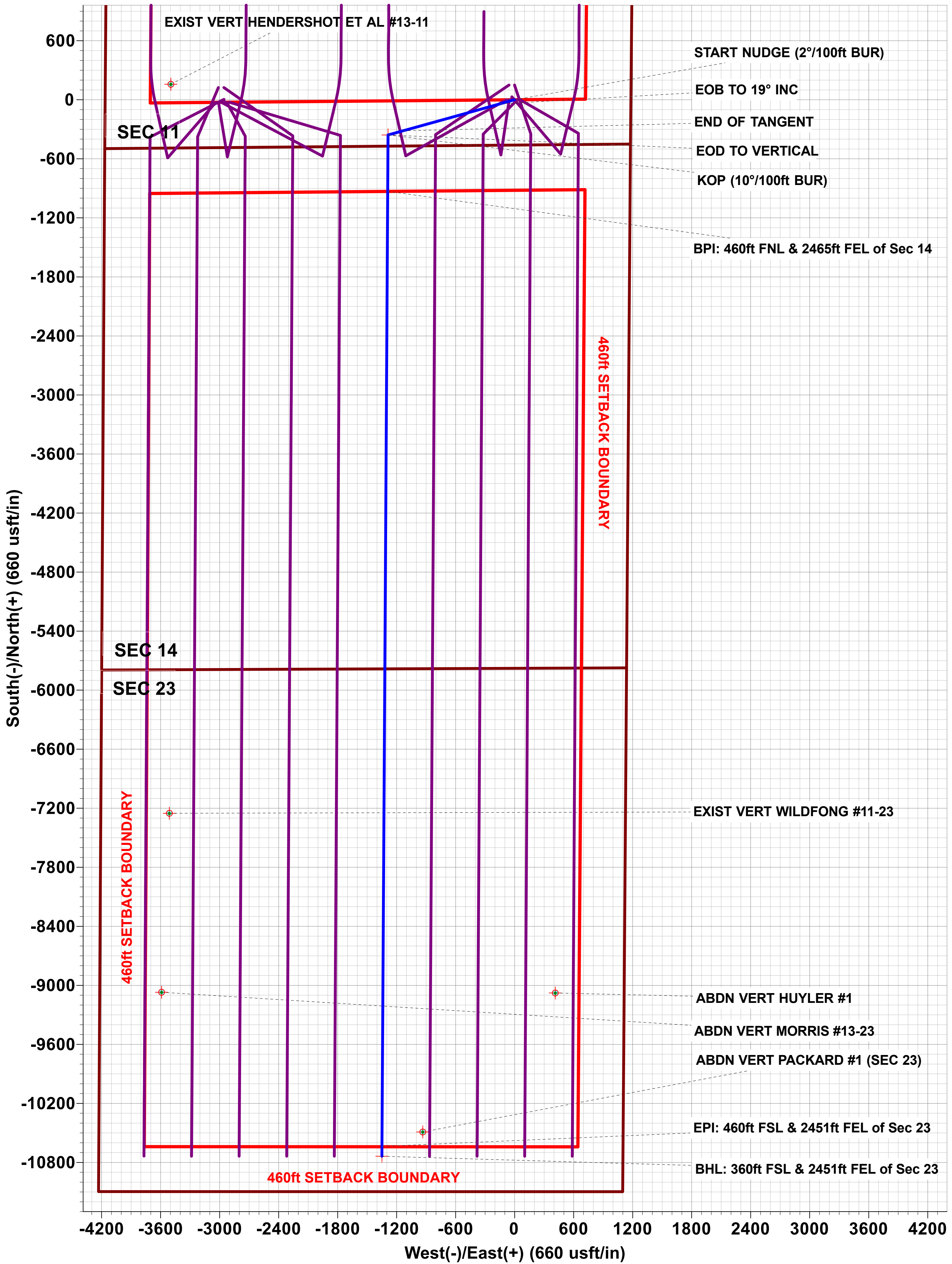
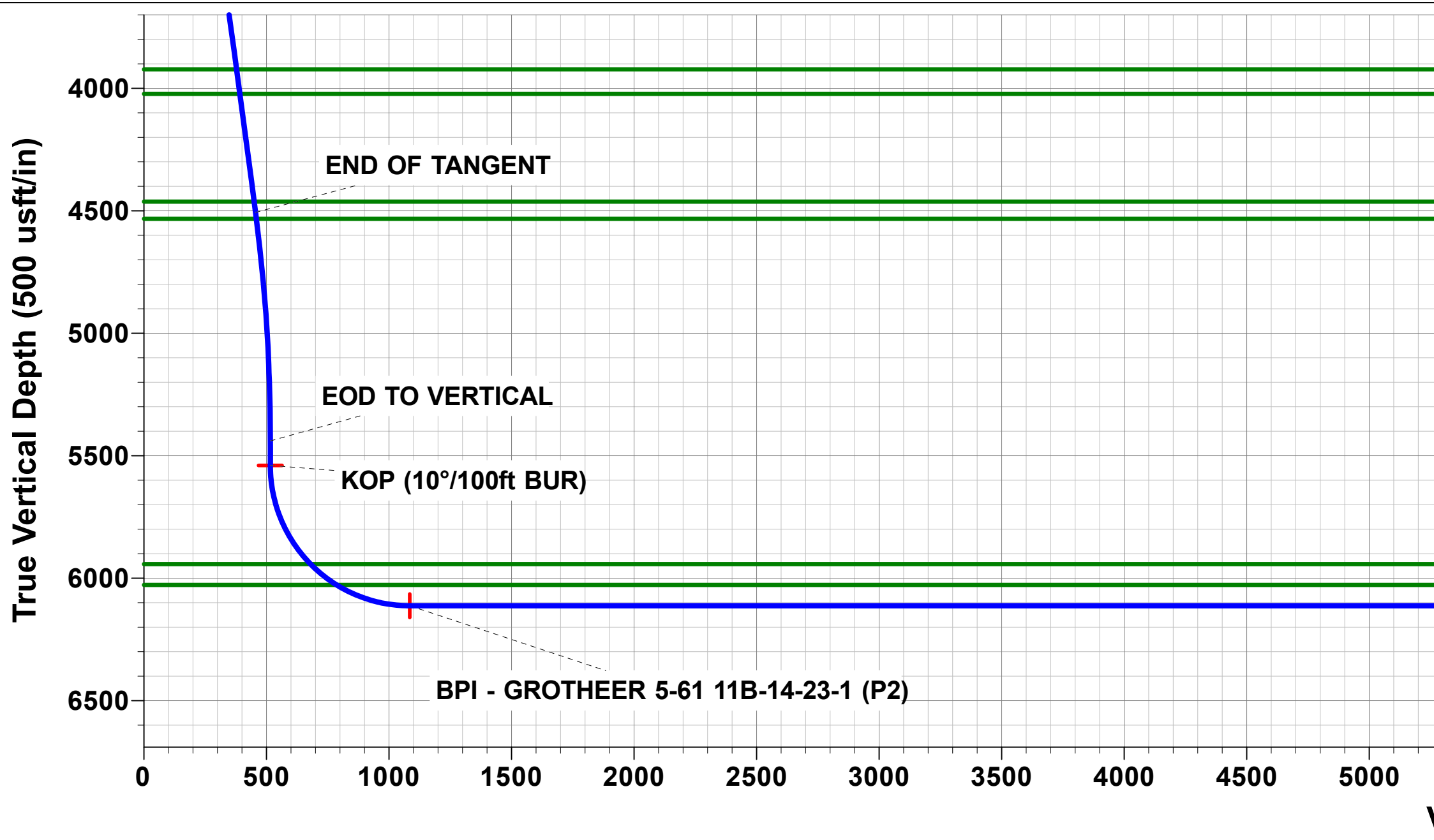
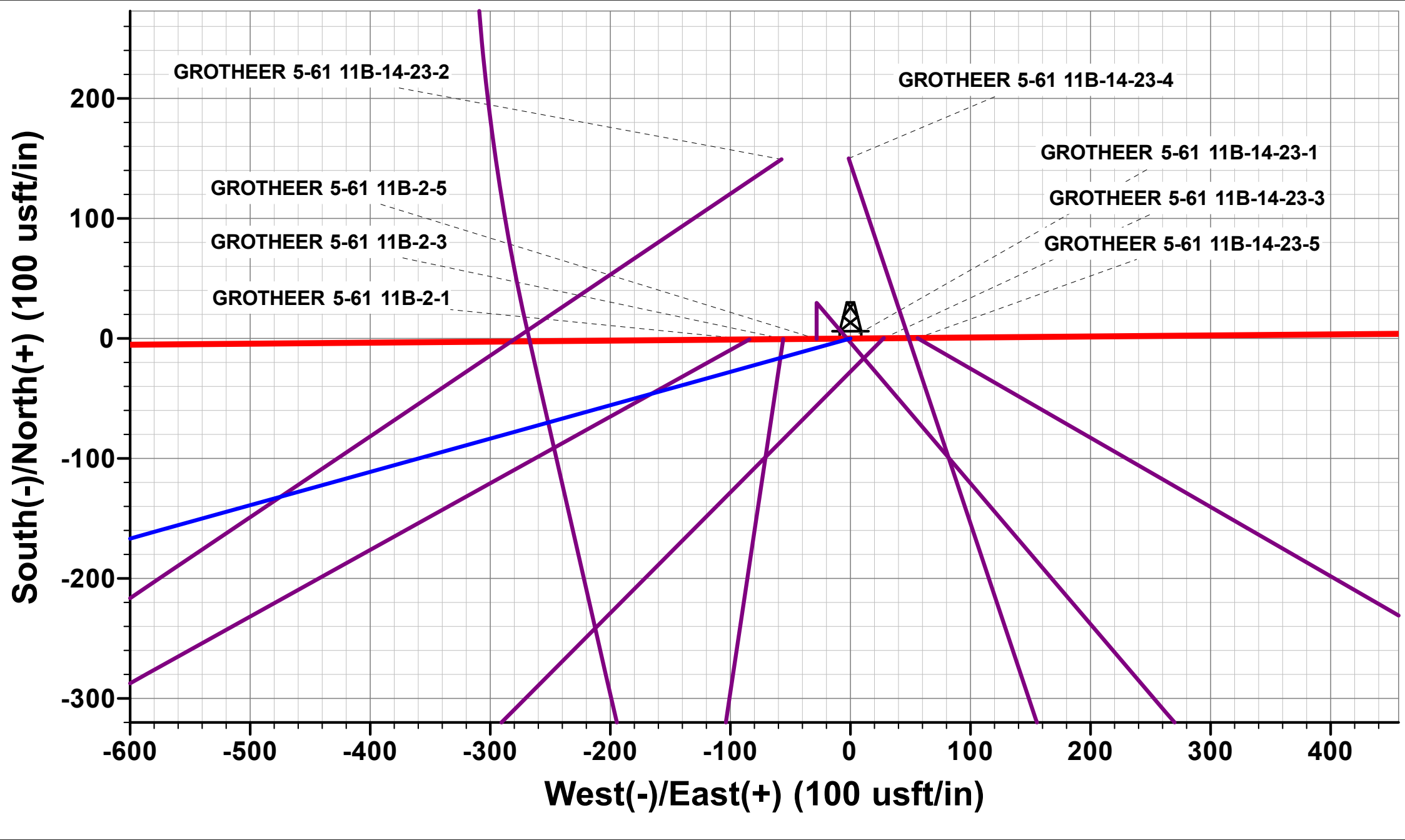
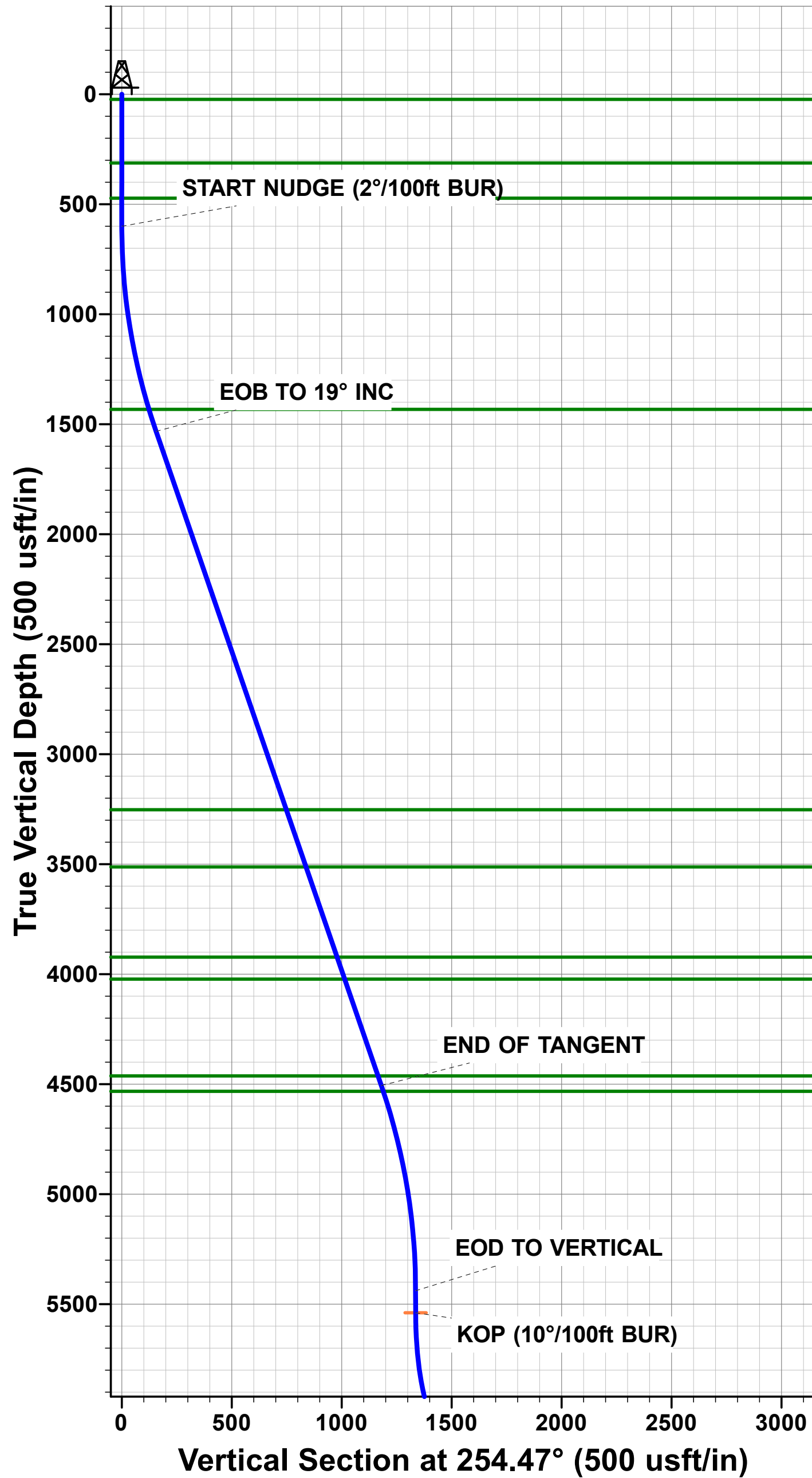
BPI : 460ft FNL & 2465ft FEL Sec 14

EPI: 460ft FSL & 2451ft FEL Sec 23

BHL: 360ft FSL & 2451ft FEL of Sec 23

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude |
|--------------------------------------|---------|-----------|----------|-----------|-------------|
| KOP - GROTHEER 5-61 11B-14-23-1 (P2) | 5539.74 | -357.83 | -1287.68 | 40.408862 | -104.174850 |
| BPI - GROTHEER 5-61 11B-14-23-1 (P2) | 6112.70 | -930.77 | -1291.09 | 40.407289 | -104.174862 |
| EPI - GROTHEER 5-61 11B-14-23-1 (P2) | 6112.70 | -10636.37 | -1349.26 | 40.380648 | -104.175069 |
| BHL - GROTHEER 5-61 11B-14-23-1 (P2) | 6112.70 | -10736.56 | -1349.83 | 40.380373 | -104.175071 |



Planning Report



| | | | |
|------------------|---------------------------------|-------------------------------------|--------------------------------|
| Database: | EDM 5000.15.1 | Local Co-ordinate Reference: | Well GROTHEER 5-61 11B-14-23-1 |
| Company: | BISON OIL & GAS II, LLC | TVD Reference: | KBE 24ft @ 4712.70usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KBE 24ft @ 4712.70usft |
| Site: | SE SE SEC. 11 T5N R61W 6th P.M. | North Reference: | True |
| Well: | GROTHEER 5-61 11B-14-23-1 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | ORIGINAL WELLBORE | | |
| Design: | PROPOSAL #2 | | |

| | | | |
|--------------------|--------------------------------|----------------------|-----------------------------|
| Project | WELD COUNTY, COLORADO (NAD 83) | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Northern Zone | | Using geodetic scale factor |

| Site | SE SE SEC. 11 T5N R61W 6th P.M. | | | | |
|-----------------------|---------------------------------|--------------|-------------------|-------------------|-------------|
| Site Position: | | Northing: | 1,395,071.08 usft | Latitude: | 40.410254 |
| From: | Lat/Long | Easting: | 3,370,200.45 usft | Longitude: | -104.170533 |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 1.10000 ft | Grid Convergence: | 0.86 ° |

| Well | | GROTHEER 5-61 11B-14-23-1 | | | | |
|----------------------|-------|---------------------------|---------------------|-------------------|---------------|---------------|
| Well Position | +N/-S | -149.38 usft | Northing: | 1,394,923.01 usft | Latitude: | 40.409844 |
| | +E/-W | 85.49 usft | Easting: | 3,370,288.17 usft | Longitude: | -104.170226 |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | usft | Ground Level: | 4,688.70 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | ORIGINAL WELLBORE | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2020 | 2022-04-26 | 7.44 | 66.71 | 51,929.34116938 |

| | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| Design | PROPOSAL #2 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
| | 0.00 | 0.00 | 0.00 | 187.17 |

| Plan Sections | | | | | | | | | | | |
|----------------------|---------|---------|----------------|-----------|--------------|--------------|------------------------|-----------------------|----------------------|---------|------------------|
| MD (usft) | Inc (°) | Azi (°) | Vertical Depth | SS (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usf) | Build Rate (°/100usf) | Turn Rate (°/100usf) | TFO (°) | Target |
| 0.00 | 0.00 | 0.00 | 0.00 | -4,712.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 600.00 | 0.00 | 0.00 | 600.00 | -4,112.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,550.14 | 19.00 | 254.47 | 1,532.82 | -3,179.88 | -41.80 | -150.42 | 2.00 | 2.00 | 0.00 | 254.47 | |
| 4,695.67 | 19.00 | 254.47 | 4,506.92 | -205.78 | -316.03 | -1,137.26 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,645.81 | 0.00 | 0.00 | 5,439.74 | 727.04 | -357.83 | -1,287.68 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 5,745.81 | 0.00 | 0.00 | 5,539.74 | 827.04 | -357.83 | -1,287.68 | 0.00 | 0.00 | 0.00 | 0.00 | KOP - GROTHEER |
| 6,645.81 | 90.00 | 180.34 | 6,112.70 | 1,400.00 | -930.77 | -1,291.09 | 10.00 | 10.00 | -19.96 | 180.34 | BPI - GROTHEER ! |
| 16,351.58 | 90.00 | 180.35 | 6,112.70 | 1,400.00 | -10,636.37 | -1,349.26 | 0.00 | 0.00 | 0.00 | 82.24 | EPI - GROTHEER ! |
| 16,451.77 | 90.00 | 180.30 | 6,112.70 | 1,400.00 | -10,736.56 | -1,349.83 | 0.05 | 0.00 | -0.05 | -91.04 | BHL - GROTHEER |

Planning Report



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|------------------|---------------------------------|-------------------------------------|--------------------------------|
| Database: | EDM 5000.15.1 | Local Co-ordinate Reference: | Well GROTHEER 5-61 11B-14-23-1 |
| Company: | BISON OIL & GAS II, LLC | TVD Reference: | KBE 24ft @ 4712.70usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KBE 24ft @ 4712.70usft |
| Site: | SE SE SEC. 11 T5N R61W 6th P.M. | North Reference: | True |
| Well: | GROTHEER 5-61 11B-14-23-1 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | ORIGINAL WELLBORE | | |
| Design: | PROPOSAL #2 | | |

Planned Survey

| MD (usft) | Inc (°) | Azi (°) | TVD (usft) | SS (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|--|------------|------------|---------------|--------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| SHL: 460ft FSL & 1182ft FEL of Sec 11 | | | | | | | | | | |
| 0.00 | 0.00 | 0.00 | 0.00 | 4,712.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Laramie-Fox Hills Formation | | | | | | | | | | |
| 23.70 | 0.00 | 0.00 | 23.70 | 4,689.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 4,612.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 4,512.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 4,412.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Pierre Formation | | | | | | | | | | |
| 312.70 | 0.00 | 0.00 | 312.70 | 4,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.00 | 400.00 | 4,312.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Upper Pierre aquifer | | | | | | | | | | |
| 472.70 | 0.00 | 0.00 | 472.70 | 4,240.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.00 | 0.00 | 0.00 | 500.00 | 4,212.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| START NUDGE (2°/100ft BUR) | | | | | | | | | | |
| 600.00 | 0.00 | 0.00 | 600.00 | 4,112.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 2.00 | 254.47 | 699.98 | 4,012.72 | -0.47 | -1.68 | 0.67 | 2.00 | 2.00 | 0.00 |
| 800.00 | 4.00 | 254.47 | 799.84 | 3,912.86 | -1.87 | -6.72 | 2.69 | 2.00 | 2.00 | 0.00 |
| 900.00 | 6.00 | 254.47 | 899.45 | 3,813.25 | -4.20 | -15.12 | 6.06 | 2.00 | 2.00 | 0.00 |
| 1,000.00 | 8.00 | 254.47 | 998.70 | 3,714.00 | -7.46 | -26.86 | 10.76 | 2.00 | 2.00 | 0.00 |
| 1,100.00 | 10.00 | 254.47 | 1,097.47 | 3,615.23 | -11.65 | -41.93 | 16.79 | 2.00 | 2.00 | 0.00 |
| 1,200.00 | 12.00 | 254.47 | 1,195.62 | 3,517.08 | -16.76 | -60.32 | 24.15 | 2.00 | 2.00 | 0.00 |
| 1,300.00 | 14.00 | 254.47 | 1,293.06 | 3,419.64 | -22.78 | -81.99 | 32.83 | 2.00 | 2.00 | 0.00 |
| 1,400.00 | 16.00 | 254.47 | 1,389.64 | 3,323.06 | -29.71 | -106.93 | 42.82 | 2.00 | 2.00 | 0.00 |
| Base of Upper Pierre aquifer | | | | | | | | | | |
| 1,444.90 | 16.90 | 254.47 | 1,432.70 | 3,280.00 | -33.12 | -119.17 | 47.72 | 2.00 | 2.00 | 0.00 |
| 1,500.00 | 18.00 | 254.47 | 1,485.27 | 3,227.43 | -37.54 | -135.09 | 54.10 | 2.00 | 2.00 | 0.00 |
| EOB TO 19° INC | | | | | | | | | | |
| 1,550.14 | 19.00 | 254.47 | 1,532.82 | 3,179.88 | -41.80 | -150.42 | 60.24 | 2.00 | 2.00 | 0.00 |
| 1,600.00 | 19.00 | 254.47 | 1,579.96 | 3,132.74 | -46.15 | -166.07 | 66.50 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 19.00 | 254.47 | 1,674.51 | 3,038.19 | -54.87 | -197.44 | 79.07 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 19.00 | 254.47 | 1,769.06 | 2,943.64 | -63.58 | -228.81 | 91.63 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 19.00 | 254.47 | 1,863.61 | 2,849.09 | -72.30 | -260.18 | 104.19 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 19.00 | 254.47 | 1,958.16 | 2,754.54 | -81.02 | -291.56 | 116.76 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 19.00 | 254.47 | 2,052.71 | 2,659.99 | -89.74 | -322.93 | 129.32 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 19.00 | 254.47 | 2,147.26 | 2,565.44 | -98.46 | -354.30 | 141.88 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 19.00 | 254.47 | 2,241.81 | 2,470.89 | -107.17 | -385.67 | 154.45 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 19.00 | 254.47 | 2,336.36 | 2,376.34 | -115.89 | -417.05 | 167.01 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 19.00 | 254.47 | 2,430.91 | 2,281.79 | -124.61 | -448.42 | 179.57 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 19.00 | 254.47 | 2,525.46 | 2,187.24 | -133.33 | -479.79 | 192.14 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 19.00 | 254.47 | 2,620.01 | 2,092.69 | -142.05 | -511.17 | 204.70 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 19.00 | 254.47 | 2,714.56 | 1,998.14 | -150.76 | -542.54 | 217.26 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 19.00 | 254.47 | 2,809.11 | 1,903.59 | -159.48 | -573.91 | 229.83 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 19.00 | 254.47 | 2,903.66 | 1,809.04 | -168.20 | -605.28 | 242.39 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 19.00 | 254.47 | 2,998.21 | 1,714.49 | -176.92 | -636.66 | 254.95 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 19.00 | 254.47 | 3,092.76 | 1,619.94 | -185.64 | -668.03 | 267.52 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 19.00 | 254.47 | 3,187.31 | 1,525.39 | -194.35 | -699.40 | 280.08 | 0.00 | 0.00 | 0.00 |
| Larimer ("Parkman") sandstone | | | | | | | | | | |
| 3,369.16 | 19.00 | 254.47 | 3,252.70 | 1,460.00 | -200.38 | -721.10 | 288.77 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 19.00 | 254.47 | 3,281.86 | 1,430.84 | -203.07 | -730.77 | 292.64 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 19.00 | 254.47 | 3,376.41 | 1,336.29 | -211.79 | -762.15 | 305.21 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 19.00 | 254.47 | 3,470.96 | 1,241.74 | -220.51 | -793.52 | 317.77 | 0.00 | 0.00 | 0.00 |
| Pierre Formation | | | | | | | | | | |
| 3,644.14 | 19.00 | 254.47 | 3,512.70 | 1,200.00 | -224.36 | -807.37 | 323.32 | 0.00 | 0.00 | 0.00 |

Planning Report



| | | | |
|------------------|---------------------------------|-------------------------------------|--------------------------------|
| Database: | EDM 5000.15.1 | Local Co-ordinate Reference: | Well GROTHEER 5-61 11B-14-23-1 |
| Company: | BISON OIL & GAS II, LLC | TVD Reference: | KBE 24ft @ 4712.70usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KBE 24ft @ 4712.70usft |
| Site: | SE SE SEC. 11 T5N R61W 6th P.M. | North Reference: | True |
| Well: | GROTHEER 5-61 11B-14-23-1 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | ORIGINAL WELLBORE | | |
| Design: | PROPOSAL #2 | | |

| Planned Survey | | | | | | | | | | |
|---------------------------------------|------------|------------|---------------|--------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| MD (usft) | Inc (°) | Azi (°) | TVD (usft) | SS (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 3,700.00 | 19.00 | 254.47 | 3,565.51 | 1,147.19 | -229.23 | -824.89 | 330.33 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 19.00 | 254.47 | 3,660.06 | 1,052.64 | -237.94 | -856.27 | 342.90 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 19.00 | 254.47 | 3,754.61 | 958.09 | -246.66 | -887.64 | 355.46 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 19.00 | 254.47 | 3,849.17 | 863.53 | -255.38 | -919.01 | 368.02 | 0.00 | 0.00 | 0.00 |
| Terry ("Sussex") sandstone | | | | | | | | | | |
| 4,077.77 | 19.00 | 254.47 | 3,922.70 | 790.00 | -262.16 | -943.41 | 377.79 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 19.00 | 254.47 | 3,943.72 | 768.98 | -264.10 | -950.38 | 380.59 | 0.00 | 0.00 | 0.00 |
| Pierre Formation | | | | | | | | | | |
| 4,183.54 | 19.00 | 254.47 | 4,022.70 | 690.00 | -271.38 | -976.59 | 391.08 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 19.00 | 254.47 | 4,038.27 | 674.43 | -272.82 | -981.76 | 393.15 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 19.00 | 254.47 | 4,132.82 | 579.88 | -281.53 | -1,013.13 | 405.71 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 19.00 | 254.47 | 4,227.37 | 485.33 | -290.25 | -1,044.50 | 418.28 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 19.00 | 254.47 | 4,321.92 | 390.78 | -298.97 | -1,075.87 | 430.84 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 19.00 | 254.47 | 4,416.47 | 296.23 | -307.69 | -1,107.25 | 443.40 | 0.00 | 0.00 | 0.00 |
| Hygiene ("Shannon") sandstone | | | | | | | | | | |
| 4,648.90 | 19.00 | 254.47 | 4,462.70 | 250.00 | -311.95 | -1,122.59 | 449.55 | 0.00 | 0.00 | 0.00 |
| END OF TANGENT | | | | | | | | | | |
| 4,695.67 | 19.00 | 254.47 | 4,506.92 | 205.78 | -316.03 | -1,137.26 | 455.42 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 18.92 | 254.47 | 4,511.02 | 201.68 | -316.41 | -1,138.62 | 455.97 | 2.00 | -2.00 | 0.00 |
| Pierre Formation | | | | | | | | | | |
| 4,722.89 | 18.46 | 254.47 | 4,532.70 | 180.00 | -318.37 | -1,145.68 | 458.80 | 2.00 | -2.00 | 0.00 |
| 4,800.00 | 16.92 | 254.47 | 4,606.16 | 106.54 | -324.64 | -1,168.25 | 467.83 | 2.00 | -2.00 | 0.00 |
| 4,900.00 | 14.92 | 254.47 | 4,702.33 | 10.37 | -331.98 | -1,194.68 | 478.41 | 2.00 | -2.00 | 0.00 |
| 5,000.00 | 12.92 | 254.47 | 4,799.39 | -86.69 | -338.42 | -1,217.85 | 487.69 | 2.00 | -2.00 | 0.00 |
| 5,100.00 | 10.92 | 254.47 | 4,897.23 | -184.53 | -343.95 | -1,237.74 | 495.66 | 2.00 | -2.00 | 0.00 |
| 5,200.00 | 8.92 | 254.47 | 4,995.73 | -283.03 | -348.56 | -1,254.33 | 502.30 | 2.00 | -2.00 | 0.00 |
| 5,300.00 | 6.92 | 254.47 | 5,094.77 | -382.07 | -352.25 | -1,267.60 | 507.62 | 2.00 | -2.00 | 0.00 |
| 5,400.00 | 4.92 | 254.47 | 5,194.23 | -481.53 | -355.01 | -1,277.53 | 511.59 | 2.00 | -2.00 | 0.00 |
| 5,500.00 | 2.92 | 254.47 | 5,293.99 | -581.29 | -356.84 | -1,284.11 | 514.23 | 2.00 | -2.00 | 0.00 |
| 5,600.00 | 0.92 | 254.47 | 5,393.93 | -681.23 | -357.73 | -1,287.33 | 515.52 | 2.00 | -2.00 | 0.00 |
| EOD TO VERTICAL | | | | | | | | | | |
| 5,645.81 | 0.00 | 0.00 | 5,439.74 | -727.04 | -357.83 | -1,287.68 | 515.66 | 2.00 | -2.00 | 230.36 |
| 5,700.00 | 0.00 | 0.00 | 5,493.93 | -781.23 | -357.83 | -1,287.68 | 515.66 | 0.00 | 0.00 | 0.00 |
| KOP (10°/100ft BUR) | | | | | | | | | | |
| 5,745.81 | 0.00 | 0.00 | 5,539.74 | -827.04 | -357.83 | -1,287.68 | 515.66 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 5.42 | 180.34 | 5,593.85 | -881.15 | -360.39 | -1,287.70 | 518.20 | 10.00 | 10.00 | 0.00 |
| 5,900.00 | 15.42 | 180.34 | 5,692.07 | -979.37 | -378.45 | -1,287.81 | 536.14 | 10.00 | 10.00 | 0.00 |
| 6,000.00 | 25.42 | 180.34 | 5,785.67 | -1,072.97 | -413.29 | -1,288.01 | 570.73 | 10.00 | 10.00 | 0.00 |
| 6,100.00 | 35.42 | 180.34 | 5,871.80 | -1,159.10 | -463.86 | -1,288.31 | 620.94 | 10.00 | 10.00 | 0.00 |
| Sharon Springs Member | | | | | | | | | | |
| 6,192.73 | 44.69 | 180.34 | 5,942.70 | -1,230.00 | -523.47 | -1,288.67 | 680.13 | 10.00 | 10.00 | 0.00 |
| 6,200.00 | 45.42 | 180.34 | 5,947.83 | -1,235.13 | -528.61 | -1,288.70 | 685.24 | 10.00 | 10.00 | 0.00 |
| 6,300.00 | 55.42 | 180.34 | 6,011.47 | -1,298.77 | -605.59 | -1,289.16 | 761.67 | 10.00 | 10.00 | 0.00 |
| Niobrara Formation | | | | | | | | | | |
| 6,329.73 | 58.39 | 180.34 | 6,027.70 | -1,315.00 | -630.49 | -1,289.30 | 786.39 | 10.00 | 10.00 | 0.00 |
| 6,400.00 | 65.42 | 180.34 | 6,060.77 | -1,348.07 | -692.44 | -1,289.67 | 847.91 | 10.00 | 10.00 | 0.00 |
| 6,500.00 | 75.42 | 180.34 | 6,094.25 | -1,381.55 | -786.54 | -1,290.23 | 941.34 | 10.00 | 10.00 | 0.00 |
| 6,600.00 | 85.42 | 180.34 | 6,110.87 | -1,398.17 | -885.01 | -1,290.81 | 1,039.12 | 10.00 | 10.00 | 0.00 |
| BPI: 460ft FNL & 2465ft FEL of Sec 14 | | | | | | | | | | |
| 6,645.81 | 90.00 | 180.34 | 6,112.70 | -1,400.00 | -930.78 | -1,291.09 | 1,084.56 | 10.00 | 10.00 | 0.00 |
| 6,700.00 | 90.00 | 180.34 | 6,112.70 | -1,400.00 | -984.96 | -1,291.41 | 1,138.36 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 90.00 | 180.34 | 6,112.70 | -1,400.00 | -1,084.96 | -1,292.00 | 1,237.65 | 0.00 | 0.00 | 0.00 |

Planning Report



| | | | |
|------------------|---------------------------------|-------------------------------------|--------------------------------|
| Database: | EDM 5000.15.1 | Local Co-ordinate Reference: | Well GROTHEER 5-61 11B-14-23-1 |
| Company: | BISON OIL & GAS II, LLC | TVD Reference: | KBE 24ft @ 4712.70usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KBE 24ft @ 4712.70usft |
| Site: | SE SE SEC. 11 T5N R61W 6th P.M. | North Reference: | True |
| Well: | GROTHEER 5-61 11B-14-23-1 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | ORIGINAL WELLBORE | | |
| Design: | PROPOSAL #2 | | |

| Planned Survey | | | | | | | | | | |
|----------------|------------|------------|---------------|--------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| MD (usft) | Inc (°) | Azi (°) | TVD (usft) | SS (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 6,900.00 | 90.00 | 180.34 | 6,112.70 | -1,400.00 | -1,184.96 | -1,292.60 | 1,336.94 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 90.00 | 180.34 | 6,112.70 | -1,400.00 | -1,284.96 | -1,293.19 | 1,436.24 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 90.00 | 180.34 | 6,112.70 | -1,400.00 | -1,384.96 | -1,293.78 | 1,535.53 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 90.00 | 180.34 | 6,112.70 | -1,400.00 | -1,484.96 | -1,294.38 | 1,634.82 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 90.00 | 180.34 | 6,112.70 | -1,400.00 | -1,584.95 | -1,294.97 | 1,734.11 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -1,684.95 | -1,295.57 | 1,833.40 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -1,784.95 | -1,296.16 | 1,932.69 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -1,884.95 | -1,296.76 | 2,031.98 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -1,984.95 | -1,297.35 | 2,131.28 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,084.94 | -1,297.95 | 2,230.57 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,184.94 | -1,298.54 | 2,329.86 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,284.94 | -1,299.14 | 2,429.15 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,384.94 | -1,299.73 | 2,528.44 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,484.94 | -1,300.33 | 2,627.73 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,584.94 | -1,300.92 | 2,727.02 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,684.93 | -1,301.52 | 2,826.32 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,784.93 | -1,302.11 | 2,925.61 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,884.93 | -1,302.71 | 3,024.90 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -2,984.93 | -1,303.30 | 3,124.19 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -3,084.93 | -1,303.90 | 3,223.48 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -3,184.93 | -1,304.50 | 3,322.77 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -3,284.92 | -1,305.09 | 3,422.06 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -3,384.92 | -1,305.69 | 3,521.36 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.00 | 180.34 | 6,112.71 | -1,400.01 | -3,484.92 | -1,306.29 | 3,620.65 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -3,584.92 | -1,306.88 | 3,719.94 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -3,684.92 | -1,307.48 | 3,819.23 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -3,784.91 | -1,308.08 | 3,918.52 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -3,884.91 | -1,308.67 | 4,017.81 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -3,984.91 | -1,309.27 | 4,117.11 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,084.91 | -1,309.87 | 4,216.40 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,184.91 | -1,310.47 | 4,315.69 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,284.91 | -1,311.06 | 4,414.98 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,384.90 | -1,311.66 | 4,514.27 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,484.90 | -1,312.26 | 4,613.56 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,584.90 | -1,312.86 | 4,712.86 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,684.90 | -1,313.46 | 4,812.15 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,784.90 | -1,314.05 | 4,911.44 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,884.90 | -1,314.65 | 5,010.73 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -4,984.89 | -1,315.25 | 5,110.02 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,084.89 | -1,315.85 | 5,209.32 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,184.89 | -1,316.45 | 5,308.61 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,284.89 | -1,317.05 | 5,407.90 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,384.89 | -1,317.64 | 5,507.19 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,484.88 | -1,318.24 | 5,606.48 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,584.88 | -1,318.84 | 5,705.77 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,684.88 | -1,319.44 | 5,805.07 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,784.88 | -1,320.04 | 5,904.36 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,884.88 | -1,320.64 | 6,003.65 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -5,984.88 | -1,321.24 | 6,102.94 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,084.87 | -1,321.84 | 6,202.23 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,184.87 | -1,322.44 | 6,301.53 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,284.87 | -1,323.04 | 6,400.82 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,384.87 | -1,323.64 | 6,500.11 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,484.87 | -1,324.24 | 6,599.40 | 0.00 | 0.00 | 0.00 |

Planning Report



| | | | |
|------------------|---------------------------------|-------------------------------------|--------------------------------|
| Database: | EDM 5000.15.1 | Local Co-ordinate Reference: | Well GROTHEER 5-61 11B-14-23-1 |
| Company: | BISON OIL & GAS II, LLC | TVD Reference: | KBE 24ft @ 4712.70usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KBE 24ft @ 4712.70usft |
| Site: | SE SE SEC. 11 T5N R61W 6th P.M. | North Reference: | True |
| Well: | GROTHEER 5-61 11B-14-23-1 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | ORIGINAL WELLBORE | | |
| Design: | PROPOSAL #2 | | |

| Planned Survey | | | | | | | | | | |
|--|------------|------------|---------------|--------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| MD (usft) | Inc (°) | Azi (°) | TVD (usft) | SS (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 12,300.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,584.86 | -1,324.84 | 6,698.69 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,684.86 | -1,325.44 | 6,797.99 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,784.86 | -1,326.04 | 6,897.28 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,884.86 | -1,326.64 | 6,996.57 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -6,984.86 | -1,327.24 | 7,095.86 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,084.86 | -1,327.84 | 7,195.15 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,184.85 | -1,328.45 | 7,294.45 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,284.85 | -1,329.05 | 7,393.74 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,384.85 | -1,329.65 | 7,493.03 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,484.85 | -1,330.25 | 7,592.32 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,584.85 | -1,330.85 | 7,691.62 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,684.84 | -1,331.45 | 7,790.91 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,784.84 | -1,332.05 | 7,890.20 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,884.84 | -1,332.66 | 7,989.49 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 180.34 | 6,112.72 | -1,400.02 | -7,984.84 | -1,333.26 | 8,088.78 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,084.84 | -1,333.86 | 8,188.08 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,184.84 | -1,334.46 | 8,287.37 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,284.83 | -1,335.06 | 8,386.66 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,384.83 | -1,335.67 | 8,485.95 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,484.83 | -1,336.27 | 8,585.25 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,584.83 | -1,336.87 | 8,684.54 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,684.83 | -1,337.47 | 8,783.83 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,784.82 | -1,338.08 | 8,883.12 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,884.82 | -1,338.68 | 8,982.41 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -8,984.82 | -1,339.28 | 9,081.71 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -9,084.82 | -1,339.89 | 9,181.00 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -9,184.82 | -1,340.49 | 9,280.29 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -9,284.82 | -1,341.09 | 9,379.58 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -9,384.81 | -1,341.70 | 9,478.88 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -9,484.81 | -1,342.30 | 9,578.17 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -9,584.81 | -1,342.91 | 9,677.46 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -9,684.81 | -1,343.51 | 9,776.75 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -9,784.81 | -1,344.11 | 9,876.05 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 90.00 | 180.35 | 6,112.71 | -1,400.01 | -9,884.80 | -1,344.72 | 9,975.34 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.00 | 180.35 | 6,112.70 | -1,400.00 | -9,984.80 | -1,345.32 | 10,074.63 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.00 | 180.35 | 6,112.70 | -1,400.00 | -10,084.80 | -1,345.93 | 10,173.92 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.00 | 180.35 | 6,112.70 | -1,400.00 | -10,184.80 | -1,346.53 | 10,273.22 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 90.00 | 180.35 | 6,112.70 | -1,400.00 | -10,284.80 | -1,347.14 | 10,372.51 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.00 | 180.35 | 6,112.70 | -1,400.00 | -10,384.80 | -1,347.74 | 10,471.80 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.00 | 180.35 | 6,112.70 | -1,400.00 | -10,484.79 | -1,348.35 | 10,571.09 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.00 | 180.35 | 6,112.70 | -1,400.00 | -10,584.79 | -1,348.95 | 10,670.39 | 0.00 | 0.00 | 0.00 |
| EPI: 460ft FSL & 2451ft FEL of Sec 23 | | | | | | | | | | |
| 16,351.58 | 90.00 | 180.35 | 6,112.70 | -1,400.00 | -10,636.37 | -1,349.26 | 10,721.60 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 90.00 | 180.32 | 6,112.70 | -1,400.00 | -10,684.79 | -1,349.55 | 10,769.68 | 0.05 | 0.00 | -0.05 |
| BHL: 360ft FSL & 2451ft FEL of Sec 23 | | | | | | | | | | |
| 16,451.77 | 90.00 | 180.30 | 6,112.70 | -1,400.00 | -10,736.56 | -1,349.83 | 10,821.08 | 0.05 | 0.00 | -0.05 |

Planning Report



| | | | |
|------------------|---------------------------------|-------------------------------------|--------------------------------|
| Database: | EDM 5000.15.1 | Local Co-ordinate Reference: | Well GROTHEER 5-61 11B-14-23-1 |
| Company: | BISON OIL & GAS II, LLC | TVD Reference: | KBE 24ft @ 4712.70usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KBE 24ft @ 4712.70usft |
| Site: | SE SE SEC. 11 T5N R61W 6th P.M. | North Reference: | True |
| Well: | GROTHEER 5-61 11B-14-23-1 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | ORIGINAL WELLBORE | | |
| Design: | PROPOSAL #2 | | |

| Formations | | | | | |
|--------------|---------------|-------------------------------|-----------|------------|-------------------------|
| MD (usft) | TVD (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 23.70 | 23.70 | Laramie-Fox Hills Formation | | | |
| 312.70 | 312.70 | Pierre Formation | | | |
| 472.70 | 472.70 | Upper Pierre aquifer | | | |
| 1,444.90 | 1,432.70 | Base of Upper Pierre aquifer | | | |
| 3,369.16 | 3,252.70 | Larimer ("Parkman") sandstone | | | |
| 3,644.14 | 3,512.70 | Pierre Formation | | | |
| 4,077.77 | 3,922.70 | Terry ("Sussex") sandstone | | | |
| 4,183.54 | 4,022.70 | Pierre Formation | | | |
| 4,648.90 | 4,462.70 | Hygiene ("Shannon") sandstone | | | |
| 4,722.89 | 4,532.70 | Pierre Formation | | | |
| 6,192.73 | 5,942.70 | Sharon Springs Member | | | |
| 6,329.73 | 6,027.70 | Niobrara Formation | | | |

| Plan Annotations | | | | |
|------------------|---------------|-------------------|-----------------|---------------------------------------|
| MD (usft) | TVD (usft) | Local Coordinates | | Comment |
| | | +N/-S (usft) | +E/-W (usft) | |
| 0.00 | 0.00 | 0.00 | 0.00 | SHL: 460ft FSL & 1182ft FEL of Sec 11 |
| 600.00 | 600.00 | 0.00 | 0.00 | START NUDGE (2°/100ft BUR) |
| 1,550.14 | 1,532.82 | -41.80 | -150.42 | EOB TO 19° INC |
| 4,695.67 | 4,506.92 | -316.03 | -1,137.26 | END OF TANGENT |
| 5,645.81 | 5,439.74 | -357.83 | -1,287.68 | EOD TO VERTICAL |
| 5,745.81 | 5,539.74 | -357.83 | -1,287.68 | KOP (10°/100ft BUR) |
| 6,645.81 | 6,112.70 | -930.78 | -1,291.09 | BPI: 460ft FNL & 2465ft FEL of Sec 14 |
| 16,351.58 | 6,112.70 | -10,636.37 | -1,349.26 | EPI: 460ft FSL & 2451ft FEL of Sec 23 |
| 16,451.77 | 6,112.70 | -10,736.56 | -1,349.83 | BHL: 360ft FSL & 2451ft FEL of Sec 23 |