



MALLARD EXPLORATION

WELD COUNTY, COLORADO (NAD 83)

SE SW SEC. 34 T8N R60W 6th P.M.

GREEN TEAL FED 34-27-1HN

ORIGINAL WELLBORE

11 March, 2020

Plan: PROPOSAL #2





Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE SW SEC. 34 T8N R60W 6th P.M.
Well: GREEN TEAL FED 34-27-1HN
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: 500ft FSL & 1822ft FWL of Sec 34 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | START NUDGE (2°/100ft BUR) |
| 1129.94 | 20.60 | 243.16 | 1107.90 | -82.68 | -163.43 | -60.18 | 183.15 | EOB TO 20.6° INC |
| 4975.01 | 20.60 | 243.16 | 4707.14 | -693.39 | -1370.52 | -504.69 | 1535.94 | END OF TANGENT |
| 6004.96 | 0.00 | 0.00 | 5715.04 | -776.07 | -1533.95 | -564.87 | 1719.09 | EOD TO VERTICAL |
| 6104.96 | 0.00 | 0.00 | 5815.04 | -776.07 | -1533.95 | -564.87 | 1719.10 | KOP (10°/100ft BUR) |
| 7004.96 | 90.00 | 1.19 | 6388.00 | -203.23 | -1522.05 | 1.28 | 2292.05 | HZ LP: 300ft FSL & 305ft FWL of Sec 34 |
| 16996.19 | 90.00 | 1.19 | 6388.00 | 9785.85 | -1314.95 | 9873.80 | 12283.28 | BHL: 300ft FNL & 305ft FWL of Sec 27 |

PROPOSED LOCAL COORDINATES:

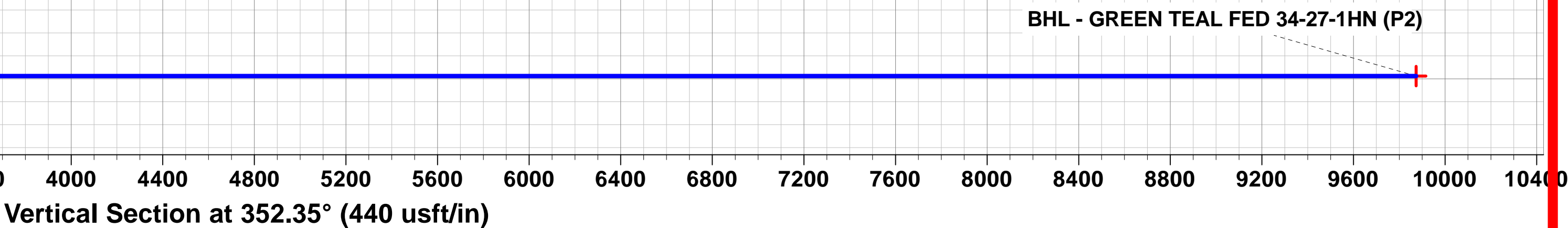
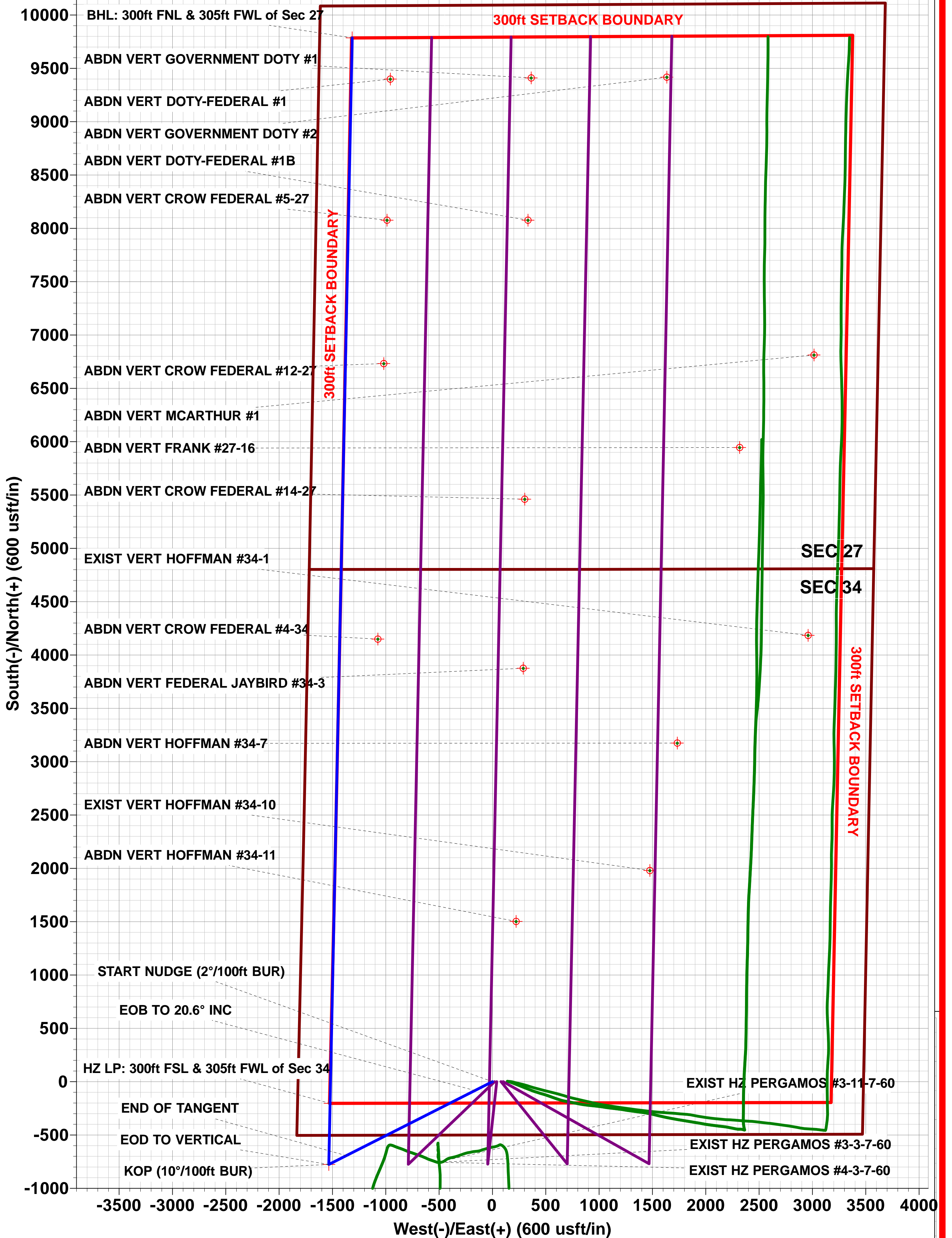
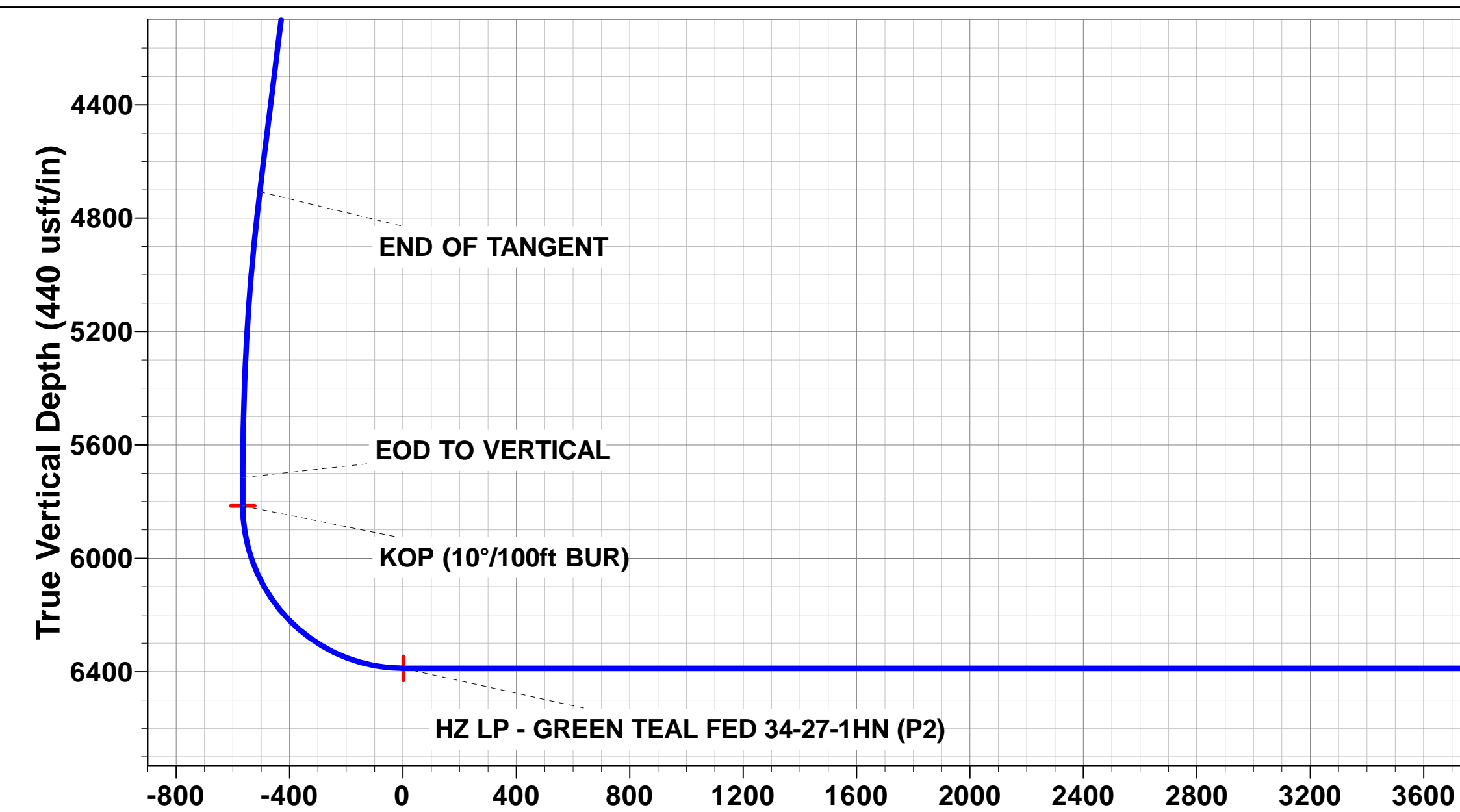
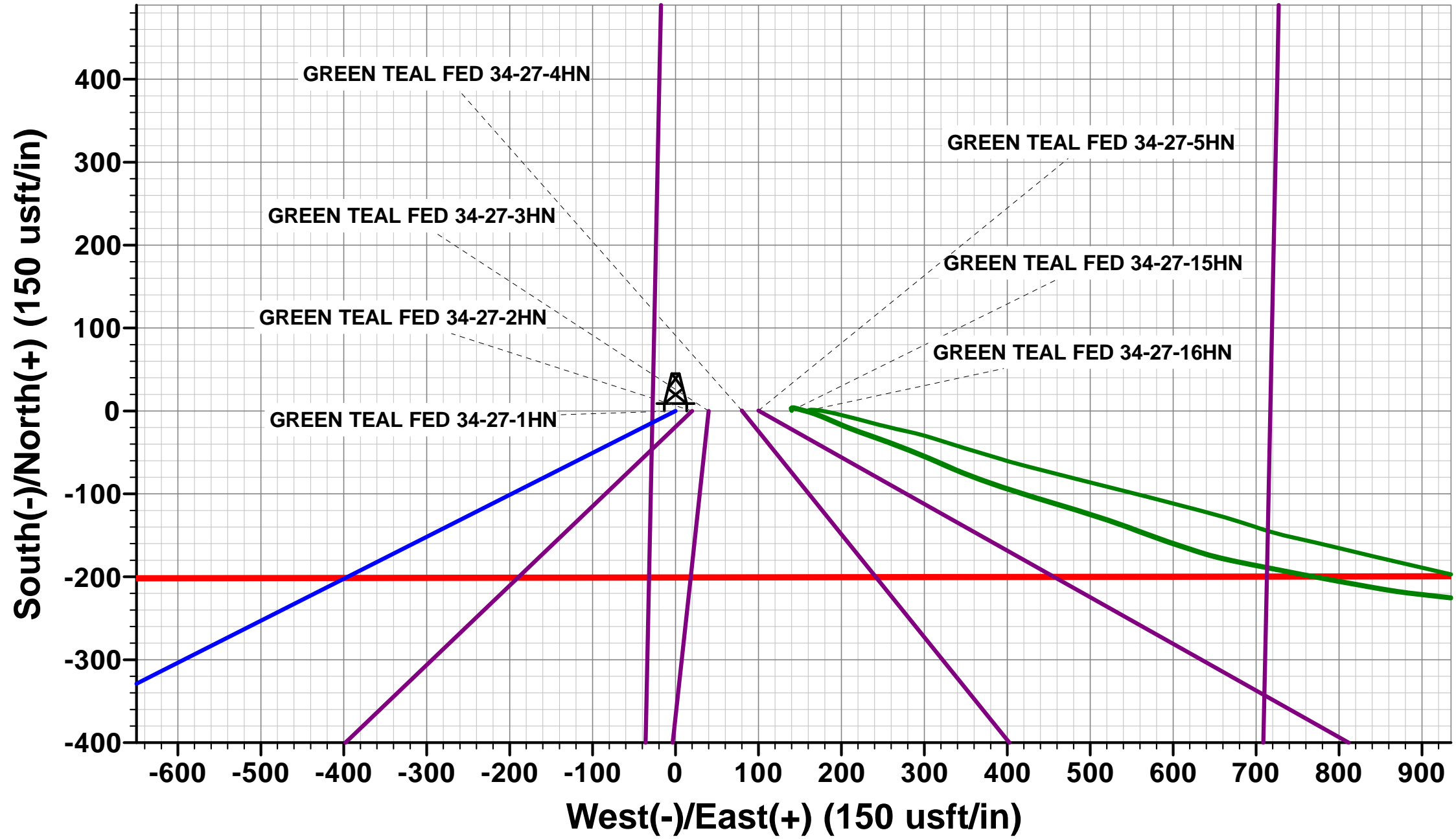
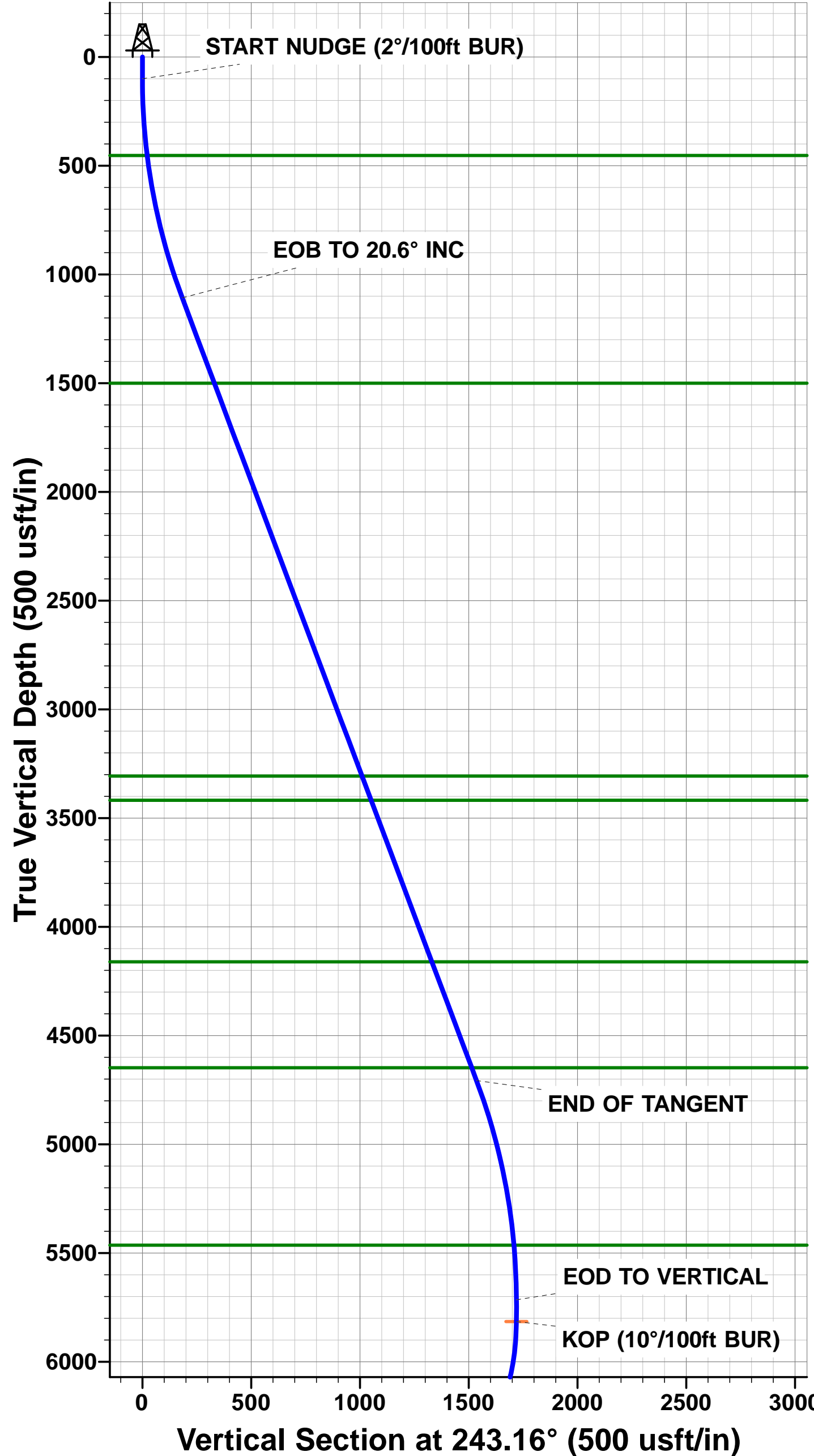
SHL: 500ft FSL & 1822ft FWL Sec 34

HZ LP: 300ft FSL & 305ft FWL Sec 34

BHL: 300ft FNL & 305ft FWL of Sec 27

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude |
|---------------------------------------|---------|---------|----------|-----------|-------------|
| KOP - GREEN TEAL FED 34-27-1HN (P2) | 5815.04 | -776.07 | -1533.95 | 40.610746 | -104.086927 |
| HZ LP - GREEN TEAL FED 34-27-1HN (P2) | 6388.00 | -203.24 | -1522.05 | 40.612318 | -104.086884 |
| BHL - GREEN TEAL FED 34-27-1HN (P2) | 6388.00 | 9785.85 | -1314.95 | 40.639736 | -104.086140 |



Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
| Database: | Database 1 | Local Co-ordinate Reference: | Well GREEN TEAL FED 34-27-1HN |
| Company: | MALLARD EXPLORATION | TVD Reference: | KB 27' @ 4950.00usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KB 27' @ 4950.00usft |
| Site: | SE SW SEC. 34 T8N R60W 6th P.M. | North Reference: | True |
| Well: | GREEN TEAL FED 34-27-1HN | 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 SW SEC. 34 T8N R60W 6th P.M. | | |
| Site Position: | | Northing: | 1,469,260.15 usft |
| From: | Lat/Long | Easting: | 3,393,696.59 usft |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 1.10 ft |
| | | Latitude: | 40.612875 |
| | | Longitude: | -104.081907 |
| | | Grid Convergence: | 0.92 ° |

| | | | |
|-----------------------------|--------------------------|-------------|----------------------------|
| Well | GREEN TEAL FED 34-27-1HN | | |
| Well Position | +N/-S | 0.36 usft | Northing: |
| | +E/-W | 140.21 usft | Easting: |
| Position Uncertainty | 0.00 usft | | Wellhead Elevation: |
| | | | Latitude: |
| | | | Longitude: |
| | | | Ground Level: |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | ORIGINAL WELLBORE | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2020 | 2020-03-11 | 7.63 | 66.97 | 52,266.41402812 |

| | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| Design | PROPOSAL #2 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
| | 6,388.00 | 0.00 | 0.00 | 352.35 |

| 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 | -4,950.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 100.00 | 0.00 | 0.00 | 100.00 | -4,850.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,129.94 | 20.60 | 243.16 | 1,107.90 | -3,842.10 | -82.68 | -163.43 | 2.00 | 2.00 | 0.00 | 243.16 | |
| 4,975.01 | 20.60 | 243.16 | 4,707.14 | -242.86 | -693.39 | -1,370.52 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,004.96 | 0.00 | 0.00 | 5,715.04 | 765.04 | -776.07 | -1,533.95 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 6,104.96 | 0.00 | 0.00 | 5,815.04 | 865.04 | -776.07 | -1,533.95 | 0.00 | 0.00 | 0.00 | 0.00 | KOP - GREEN TEA |
| 7,004.96 | 90.00 | 1.19 | 6,388.00 | 1,438.00 | -203.24 | -1,522.05 | 10.00 | 10.00 | 0.13 | 1.19 | HZ LP - GREEN TE |
| 16,996.19 | 90.00 | 1.19 | 6,388.00 | 1,438.00 | 9,785.85 | -1,314.95 | 0.00 | 0.00 | 0.00 | -80.25 | BHL - GREEN TEA |

Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
| Database: | Database 1 | Local Co-ordinate Reference: | Well GREEN TEAL FED 34-27-1HN |
| Company: | MALLARD EXPLORATION | TVD Reference: | KB 27' @ 4950.00usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KB 27' @ 4950.00usft |
| Site: | SE SW SEC. 34 T8N R60W 6th P.M. | North Reference: | True |
| Well: | GREEN TEAL FED 34-27-1HN | 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: 500ft FSL & 1822ft FWL of Sec 34 | | | | | | | | | | |
| 0.00 | 0.00 | 0.00 | 0.00 | 4,950.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| START NUDGE (2°/100ft BUR) | | | | | | | | | | |
| 100.00 | 0.00 | 0.00 | 100.00 | 4,850.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 2.00 | 243.16 | 199.98 | 4,750.02 | -0.79 | -1.56 | -0.57 | 2.00 | 2.00 | 0.00 |
| 300.00 | 4.00 | 243.16 | 299.84 | 4,650.16 | -3.15 | -6.23 | -2.29 | 2.00 | 2.00 | 0.00 |
| 400.00 | 6.00 | 243.16 | 399.45 | 4,550.55 | -7.08 | -14.00 | -5.16 | 2.00 | 2.00 | 0.00 |
| Fox Hills Base | | | | | | | | | | |
| 453.90 | 7.08 | 243.16 | 453.00 | 4,497.00 | -9.86 | -19.48 | -7.17 | 2.00 | 2.00 | 0.00 |
| 500.00 | 8.00 | 243.16 | 498.70 | 4,451.30 | -12.59 | -24.88 | -9.16 | 2.00 | 2.00 | 0.00 |
| 600.00 | 10.00 | 243.16 | 597.47 | 4,352.53 | -19.65 | -38.84 | -14.30 | 2.00 | 2.00 | 0.00 |
| 700.00 | 12.00 | 243.16 | 695.62 | 4,254.38 | -28.26 | -55.86 | -20.57 | 2.00 | 2.00 | 0.00 |
| 800.00 | 14.00 | 243.16 | 793.06 | 4,156.94 | -38.42 | -75.93 | -27.96 | 2.00 | 2.00 | 0.00 |
| 900.00 | 16.00 | 243.16 | 889.64 | 4,060.36 | -50.10 | -99.02 | -36.47 | 2.00 | 2.00 | 0.00 |
| 1,000.00 | 18.00 | 243.16 | 985.27 | 3,964.73 | -63.30 | -125.11 | -46.07 | 2.00 | 2.00 | 0.00 |
| 1,100.00 | 20.00 | 243.16 | 1,079.82 | 3,870.18 | -77.99 | -154.16 | -56.77 | 2.00 | 2.00 | 0.00 |
| EOB TO 20.6° INC | | | | | | | | | | |
| 1,129.94 | 20.60 | 243.16 | 1,107.90 | 3,842.10 | -82.68 | -163.43 | -60.18 | 2.00 | 2.00 | 0.00 |
| 1,200.00 | 20.60 | 243.16 | 1,173.48 | 3,776.52 | -93.81 | -185.42 | -68.28 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 20.60 | 243.16 | 1,267.08 | 3,682.92 | -109.69 | -216.82 | -79.84 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 20.60 | 243.16 | 1,360.69 | 3,589.31 | -125.58 | -248.21 | -91.40 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 20.60 | 243.16 | 1,454.30 | 3,495.70 | -141.46 | -279.60 | -102.96 | 0.00 | 0.00 | 0.00 |
| Pierre Shale Top | | | | | | | | | | |
| 1,548.82 | 20.60 | 243.16 | 1,500.00 | 3,450.00 | -149.21 | -294.93 | -108.61 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 20.60 | 243.16 | 1,547.90 | 3,402.10 | -157.34 | -311.00 | -114.52 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 20.60 | 243.16 | 1,641.51 | 3,308.49 | -173.22 | -342.39 | -126.08 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 20.60 | 243.16 | 1,735.12 | 3,214.88 | -189.11 | -373.78 | -137.64 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 20.60 | 243.16 | 1,828.72 | 3,121.28 | -204.99 | -405.18 | -149.20 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 20.60 | 243.16 | 1,922.33 | 3,027.67 | -220.87 | -436.57 | -160.77 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 20.60 | 243.16 | 2,015.94 | 2,934.06 | -236.76 | -467.96 | -172.33 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 20.60 | 243.16 | 2,109.54 | 2,840.46 | -252.64 | -499.35 | -183.89 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 20.60 | 243.16 | 2,203.15 | 2,746.85 | -268.52 | -530.75 | -195.45 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 20.60 | 243.16 | 2,296.76 | 2,653.24 | -284.40 | -562.14 | -207.01 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 20.60 | 243.16 | 2,390.36 | 2,559.64 | -300.29 | -593.53 | -218.57 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 20.60 | 243.16 | 2,483.97 | 2,466.03 | -316.17 | -624.93 | -230.13 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 20.60 | 243.16 | 2,577.58 | 2,372.42 | -332.05 | -656.32 | -241.69 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 20.60 | 243.16 | 2,671.18 | 2,278.82 | -347.93 | -687.71 | -253.25 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 20.60 | 243.16 | 2,764.79 | 2,185.21 | -363.82 | -719.11 | -264.81 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 20.60 | 243.16 | 2,858.40 | 2,091.60 | -379.70 | -750.50 | -276.37 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 20.60 | 243.16 | 2,952.00 | 1,998.00 | -395.58 | -781.89 | -287.93 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 20.60 | 243.16 | 3,045.61 | 1,904.39 | -411.47 | -813.29 | -299.49 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 20.60 | 243.16 | 3,139.22 | 1,810.78 | -427.35 | -844.68 | -311.05 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 20.60 | 243.16 | 3,232.82 | 1,717.18 | -443.23 | -876.07 | -322.61 | 0.00 | 0.00 | 0.00 |
| Richard Sandstone | | | | | | | | | | |
| 3,479.24 | 20.60 | 243.16 | 3,307.00 | 1,643.00 | -455.82 | -900.95 | -331.77 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 20.60 | 243.16 | 3,326.43 | 1,623.57 | -459.11 | -907.47 | -334.17 | 0.00 | 0.00 | 0.00 |
| Parkman Sandstone | | | | | | | | | | |
| 3,597.82 | 20.60 | 243.16 | 3,418.00 | 1,532.00 | -474.65 | -938.18 | -345.48 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 20.60 | 243.16 | 3,420.04 | 1,529.96 | -475.00 | -938.86 | -345.73 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 20.60 | 243.16 | 3,513.64 | 1,436.36 | -490.88 | -970.25 | -357.29 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 20.60 | 243.16 | 3,607.25 | 1,342.75 | -506.76 | -1,001.65 | -368.85 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 20.60 | 243.16 | 3,700.86 | 1,249.14 | -522.64 | -1,033.04 | -380.41 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 20.60 | 243.16 | 3,794.46 | 1,155.54 | -538.53 | -1,064.43 | -391.97 | 0.00 | 0.00 | 0.00 |

Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
| Database: | Database 1 | Local Co-ordinate Reference: | Well GREEN TEAL FED 34-27-1HN |
| Company: | MALLARD EXPLORATION | TVD Reference: | KB 27' @ 4950.00usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KB 27' @ 4950.00usft |
| Site: | SE SW SEC. 34 T8N R60W 6th P.M. | North Reference: | True |
| Well: | GREEN TEAL FED 34-27-1HN | 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) |
| 4,100.00 | 20.60 | 243.16 | 3,888.07 | 1,061.93 | -554.41 | -1,095.83 | -403.53 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 20.60 | 243.16 | 3,981.68 | 968.32 | -570.29 | -1,127.22 | -415.10 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 20.60 | 243.16 | 4,075.28 | 874.72 | -586.18 | -1,158.61 | -426.66 | 0.00 | 0.00 | 0.00 |
| Sussex Sandstone | | | | | | | | | | |
| 4,391.57 | 20.60 | 243.16 | 4,161.00 | 789.00 | -600.72 | -1,187.36 | -437.24 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 20.60 | 243.16 | 4,168.89 | 781.11 | -602.06 | -1,190.00 | -438.22 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 20.60 | 243.16 | 4,262.50 | 687.50 | -617.94 | -1,221.40 | -449.78 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 20.60 | 243.16 | 4,356.10 | 593.90 | -633.82 | -1,252.79 | -461.34 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 20.60 | 243.16 | 4,449.71 | 500.29 | -649.71 | -1,284.18 | -472.90 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 20.60 | 243.16 | 4,543.32 | 406.68 | -665.59 | -1,315.58 | -484.46 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 20.60 | 243.16 | 4,636.92 | 313.08 | -681.47 | -1,346.97 | -496.02 | 0.00 | 0.00 | 0.00 |
| Shannon Sandstone | | | | | | | | | | |
| 4,911.83 | 20.60 | 243.16 | 4,648.00 | 302.00 | -683.35 | -1,350.69 | -497.39 | 0.00 | 0.00 | 0.00 |
| END OF TANGENT | | | | | | | | | | |
| 4,975.01 | 20.60 | 243.16 | 4,707.14 | 242.86 | -693.39 | -1,370.52 | -504.69 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 20.10 | 243.16 | 4,730.57 | 219.43 | -697.31 | -1,378.27 | -507.55 | 2.00 | -2.00 | 0.00 |
| 5,100.00 | 18.10 | 243.16 | 4,825.06 | 124.94 | -712.08 | -1,407.47 | -518.30 | 2.00 | -2.00 | 0.00 |
| 5,200.00 | 16.10 | 243.16 | 4,920.63 | 29.37 | -725.35 | -1,433.70 | -527.96 | 2.00 | -2.00 | 0.00 |
| 5,300.00 | 14.10 | 243.16 | 5,017.18 | -67.18 | -737.11 | -1,456.94 | -536.52 | 2.00 | -2.00 | 0.00 |
| 5,400.00 | 12.10 | 243.16 | 5,114.57 | -164.57 | -747.34 | -1,477.17 | -543.96 | 2.00 | -2.00 | 0.00 |
| 5,500.00 | 10.10 | 243.16 | 5,212.69 | -262.69 | -756.03 | -1,494.34 | -550.29 | 2.00 | -2.00 | 0.00 |
| 5,600.00 | 8.10 | 243.16 | 5,311.43 | -361.43 | -763.17 | -1,508.45 | -555.48 | 2.00 | -2.00 | 0.00 |
| 5,700.00 | 6.10 | 243.16 | 5,410.66 | -460.66 | -768.75 | -1,519.48 | -559.54 | 2.00 | -2.00 | 0.00 |
| TeePee Buttes | | | | | | | | | | |
| 5,753.59 | 5.03 | 243.16 | 5,464.00 | -514.00 | -771.09 | -1,524.12 | -561.25 | 2.00 | -2.00 | 0.00 |
| 5,800.00 | 4.10 | 243.16 | 5,510.26 | -560.26 | -772.76 | -1,527.41 | -562.46 | 2.00 | -2.00 | 0.00 |
| 5,900.00 | 2.10 | 243.16 | 5,610.11 | -660.11 | -775.20 | -1,532.23 | -564.24 | 2.00 | -2.00 | 0.00 |
| 6,000.00 | 0.10 | 243.16 | 5,710.08 | -760.08 | -776.07 | -1,533.95 | -564.87 | 2.00 | -2.00 | 0.00 |
| EOD TO VERTICAL | | | | | | | | | | |
| 6,004.96 | 0.00 | 0.00 | 5,715.04 | -765.04 | -776.07 | -1,533.95 | -564.87 | 2.00 | -2.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 5,810.08 | -860.08 | -776.07 | -1,533.95 | -564.87 | 0.00 | 0.00 | 0.00 |
| KOP (10°/100ft BUR) | | | | | | | | | | |
| 6,104.96 | 0.00 | 0.00 | 5,815.04 | -865.04 | -776.07 | -1,533.95 | -564.87 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 9.50 | 1.19 | 5,909.65 | -959.65 | -768.21 | -1,533.79 | -557.10 | 10.00 | 10.00 | 0.00 |
| 6,300.00 | 19.50 | 1.19 | 6,006.34 | -1,056.34 | -743.20 | -1,533.27 | -532.39 | 10.00 | 10.00 | 0.00 |
| 6,400.00 | 29.50 | 1.19 | 6,097.22 | -1,147.22 | -701.78 | -1,532.41 | -491.45 | 10.00 | 10.00 | 0.00 |
| Sharon Springs | | | | | | | | | | |
| 6,432.46 | 32.75 | 1.19 | 6,125.00 | -1,175.00 | -685.01 | -1,532.06 | -474.88 | 10.00 | 10.00 | 0.00 |
| Niobrara Top | | | | | | | | | | |
| 6,475.14 | 37.02 | 1.19 | 6,160.00 | -1,210.00 | -660.61 | -1,531.55 | -450.76 | 10.00 | 10.00 | 0.00 |
| 6,500.00 | 39.50 | 1.19 | 6,179.52 | -1,229.52 | -645.22 | -1,531.23 | -435.55 | 10.00 | 10.00 | 0.00 |
| 6,600.00 | 49.50 | 1.19 | 6,250.75 | -1,300.75 | -575.23 | -1,529.78 | -366.38 | 10.00 | 10.00 | 0.00 |
| Niobrara B2 Chalk Top | | | | | | | | | | |
| 6,664.88 | 55.99 | 1.19 | 6,290.00 | -1,340.00 | -523.63 | -1,528.70 | -315.38 | 10.00 | 10.00 | 0.00 |
| 6,700.00 | 59.50 | 1.19 | 6,308.74 | -1,358.74 | -493.93 | -1,528.09 | -286.03 | 10.00 | 10.00 | 0.00 |
| 6,800.00 | 69.50 | 1.19 | 6,351.73 | -1,401.73 | -403.81 | -1,526.21 | -196.96 | 10.00 | 10.00 | 0.00 |
| Niobrara C Chalk Top | | | | | | | | | | |
| 6,825.10 | 72.01 | 1.19 | 6,360.00 | -1,410.00 | -380.12 | -1,525.72 | -173.54 | 10.00 | 10.00 | 0.00 |
| 6,900.00 | 79.50 | 1.19 | 6,378.41 | -1,428.41 | -307.59 | -1,524.22 | -101.86 | 10.00 | 10.00 | 0.00 |
| Niobrara C Chalk Target Top | | | | | | | | | | |
| 6,909.10 | 80.41 | 1.19 | 6,380.00 | -1,430.00 | -298.62 | -1,524.03 | -93.00 | 10.00 | 10.00 | 0.00 |
| 7,000.00 | 89.50 | 1.19 | 6,387.98 | -1,437.98 | -208.19 | -1,522.15 | -3.63 | 10.00 | 10.00 | 0.00 |

Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
| Database: | Database 1 | Local Co-ordinate Reference: | Well GREEN TEAL FED 34-27-1HN |
| Company: | MALLARD EXPLORATION | TVD Reference: | KB 27' @ 4950.00usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KB 27' @ 4950.00usft |
| Site: | SE SW SEC. 34 T8N R60W 6th P.M. | North Reference: | True |
| Well: | GREEN TEAL FED 34-27-1HN | 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) |
| HZ LP: 300ft FSL & 305ft FWL of Sec 34 - Niobrara C Chalk Landing Point | | | | | | | | | | |
| 7,004.96 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | -203.24 | -1,522.05 | 1.27 | 10.00 | 10.00 | 0.00 |
| 7,100.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | -108.21 | -1,520.07 | 95.19 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | -8.24 | -1,518.00 | 194.00 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 91.74 | -1,515.92 | 292.81 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 191.72 | -1,513.84 | 391.62 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 291.70 | -1,511.76 | 490.43 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 391.68 | -1,509.69 | 589.24 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 491.66 | -1,507.61 | 688.05 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 591.63 | -1,505.53 | 786.86 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 691.61 | -1,503.46 | 885.68 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 791.59 | -1,501.38 | 984.49 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 891.57 | -1,499.30 | 1,083.30 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 991.55 | -1,497.23 | 1,182.11 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,091.53 | -1,495.15 | 1,280.92 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,191.51 | -1,493.08 | 1,379.73 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,291.48 | -1,491.00 | 1,478.54 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,391.46 | -1,488.92 | 1,577.36 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,491.44 | -1,486.85 | 1,676.17 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,591.42 | -1,484.77 | 1,774.98 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,691.40 | -1,482.70 | 1,873.79 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,791.38 | -1,480.62 | 1,972.60 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,891.35 | -1,478.54 | 2,071.41 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 1,991.33 | -1,476.47 | 2,170.22 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 2,091.31 | -1,474.39 | 2,269.04 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 2,191.29 | -1,472.32 | 2,367.85 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 2,291.27 | -1,470.24 | 2,466.66 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 2,391.25 | -1,468.17 | 2,565.47 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 2,491.23 | -1,466.09 | 2,664.28 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 2,591.20 | -1,464.02 | 2,763.09 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 2,691.18 | -1,461.94 | 2,861.91 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 2,791.16 | -1,459.87 | 2,960.72 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 2,891.14 | -1,457.79 | 3,059.53 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 2,991.12 | -1,455.72 | 3,158.34 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,091.10 | -1,453.65 | 3,257.15 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,191.07 | -1,451.57 | 3,355.96 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,291.05 | -1,449.50 | 3,454.78 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,391.03 | -1,447.42 | 3,553.59 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,491.01 | -1,445.35 | 3,652.40 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,590.99 | -1,443.27 | 3,751.21 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,690.97 | -1,441.20 | 3,850.02 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,790.95 | -1,439.13 | 3,948.83 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,890.92 | -1,437.05 | 4,047.65 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 3,990.90 | -1,434.98 | 4,146.46 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,090.88 | -1,432.91 | 4,245.27 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,190.86 | -1,430.83 | 4,344.08 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,290.84 | -1,428.76 | 4,442.89 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,390.82 | -1,426.69 | 4,541.70 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,490.80 | -1,424.61 | 4,640.52 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,590.77 | -1,422.54 | 4,739.33 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,690.75 | -1,420.47 | 4,838.14 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,790.73 | -1,418.39 | 4,936.95 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,890.71 | -1,416.32 | 5,035.76 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 4,990.69 | -1,414.25 | 5,134.58 | 0.00 | 0.00 | 0.00 |

Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
| Database: | Database 1 | Local Co-ordinate Reference: | Well GREEN TEAL FED 34-27-1HN |
| Company: | MALLARD EXPLORATION | TVD Reference: | KB 27' @ 4950.00usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KB 27' @ 4950.00usft |
| Site: | SE SW SEC. 34 T8N R60W 6th P.M. | North Reference: | True |
| Well: | GREEN TEAL FED 34-27-1HN | 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 | 1.19 | 6,388.02 | -1,438.02 | 5,090.67 | -1,412.18 | 5,233.39 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 5,190.64 | -1,410.10 | 5,332.20 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 5,290.62 | -1,408.03 | 5,431.01 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 5,390.60 | -1,405.96 | 5,529.82 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 5,490.58 | -1,403.89 | 5,628.64 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 5,590.56 | -1,401.81 | 5,727.45 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 5,690.54 | -1,399.74 | 5,826.26 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 5,790.52 | -1,397.67 | 5,925.07 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 5,890.49 | -1,395.60 | 6,023.88 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 5,990.47 | -1,393.53 | 6,122.70 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,090.45 | -1,391.45 | 6,221.51 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,190.43 | -1,389.38 | 6,320.32 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,290.41 | -1,387.31 | 6,419.13 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,390.39 | -1,385.24 | 6,517.94 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,490.37 | -1,383.17 | 6,616.76 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,590.34 | -1,381.10 | 6,715.57 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,690.32 | -1,379.03 | 6,814.38 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,790.30 | -1,376.96 | 6,913.19 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,890.28 | -1,374.88 | 7,012.01 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 6,990.26 | -1,372.81 | 7,110.82 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 7,090.24 | -1,370.74 | 7,209.63 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.00 | 1.19 | 6,388.02 | -1,438.02 | 7,190.22 | -1,368.67 | 7,308.44 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 7,290.19 | -1,366.60 | 7,407.25 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 7,390.17 | -1,364.53 | 7,506.07 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 7,490.15 | -1,362.46 | 7,604.88 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 7,590.13 | -1,360.39 | 7,703.69 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 7,690.11 | -1,358.32 | 7,802.50 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 7,790.09 | -1,356.25 | 7,901.32 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 7,890.07 | -1,354.18 | 8,000.13 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 7,990.04 | -1,352.11 | 8,098.94 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,090.02 | -1,350.04 | 8,197.75 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,190.00 | -1,347.97 | 8,296.57 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,289.98 | -1,345.90 | 8,395.38 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,389.96 | -1,343.83 | 8,494.19 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,489.94 | -1,341.76 | 8,593.00 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,589.92 | -1,339.69 | 8,691.81 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,689.89 | -1,337.62 | 8,790.63 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,789.87 | -1,335.55 | 8,889.44 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,889.85 | -1,333.49 | 8,988.25 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 8,989.83 | -1,331.42 | 9,087.06 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.00 | 1.19 | 6,388.01 | -1,438.01 | 9,089.81 | -1,329.35 | 9,185.88 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 9,189.79 | -1,327.28 | 9,284.69 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 9,289.77 | -1,325.21 | 9,383.50 | 0.00 | 0.00 | 0.00 |
| 16,600.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 9,389.74 | -1,323.14 | 9,482.31 | 0.00 | 0.00 | 0.00 |
| 16,700.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 9,489.72 | -1,321.07 | 9,581.13 | 0.00 | 0.00 | 0.00 |
| 16,800.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 9,589.70 | -1,319.00 | 9,679.94 | 0.00 | 0.00 | 0.00 |
| 16,900.00 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 9,689.68 | -1,316.94 | 9,778.75 | 0.00 | 0.00 | 0.00 |
| BHL: 300ft FNL & 305ft FWL of Sec 27 | | | | | | | | | | |
| 16,996.19 | 90.00 | 1.19 | 6,388.00 | -1,438.00 | 9,785.85 | -1,314.95 | 9,873.80 | 0.00 | 0.00 | 0.00 |

Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|-------------------------------|
| Database: | Database 1 | Local Co-ordinate Reference: | Well GREEN TEAL FED 34-27-1HN |
| Company: | MALLARD EXPLORATION | TVD Reference: | KB 27' @ 4950.00usft |
| Project: | WELD COUNTY, COLORADO (NAD 83) | MD Reference: | KB 27' @ 4950.00usft |
| Site: | SE SW SEC. 34 T8N R60W 6th P.M. | North Reference: | True |
| Well: | GREEN TEAL FED 34-27-1HN | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | ORIGINAL WELLBORE | | |
| Design: | PROPOSAL #2 | | |

| Formations | | | | | |
|--------------|---------------|--------------------------------|-----------|------------|-------------------------|
| MD (usft) | TVD (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 453.90 | 453.00 | Fox Hills Base | | | |
| 1,548.82 | 1,500.00 | Pierre Shale Top | | | |
| 3,479.24 | 3,307.00 | Richard Sandstone | | | |
| 3,597.82 | 3,418.00 | Parkman Sandstone | | | |
| 4,391.57 | 4,161.00 | Sussex Sandstone | | | |
| 4,911.83 | 4,648.00 | Shannon Sandstone | | | |
| 5,753.59 | 5,464.00 | TeePee Buttes | | | |
| 6,432.46 | 6,125.00 | Sharon Springs | | | |
| 6,475.14 | 6,160.00 | Niobrara Top | | | |
| 6,664.88 | 6,290.00 | Niobrara B2 Chalk Top | | | |
| 6,825.10 | 6,360.00 | Niobrara C Chalk Top | | | |
| 6,909.10 | 6,380.00 | Niobrara C Chalk Target Top | | | |
| 7,004.96 | 6,388.00 | Niobrara C Chalk Landing Point | | | |

| Plan Annotations | | | | |
|------------------|---------------|-------------------|-----------------|--|
| MD (usft) | TVD (usft) | Local Coordinates | | Comment |
| | | +N/-S (usft) | +E/-W (usft) | |
| 0.00 | 0.00 | 0.00 | 0.00 | SHL: 500ft FSL & 1822ft FWL of Sec 34 |
| 100.00 | 100.00 | 0.00 | 0.00 | START NUDGE (2"/100ft BUR) |
| 1,129.94 | 1,107.90 | -82.68 | -163.43 | EOB TO 20.6° INC |
| 4,975.01 | 4,707.14 | -693.39 | -1,370.52 | END OF TANGENT |
| 6,004.96 | 5,715.04 | -776.07 | -1,533.95 | EOD TO VERTICAL |
| 6,104.96 | 5,815.04 | -776.07 | -1,533.95 | KOP (10°/100ft BUR) |
| 7,004.96 | 6,388.00 | -203.23 | -1,522.05 | HZ LP: 300ft FSL & 305ft FWL of Sec 34 |
| 16,996.19 | 6,388.00 | 9,785.85 | -1,314.95 | BHL: 300ft FNL & 305ft FWL of Sec 27 |