

BONANZA CREEK ENERGY

WELD COUNTY

SEC 2-T5N-R62W

STATE ANTELOPE W-C-3HN

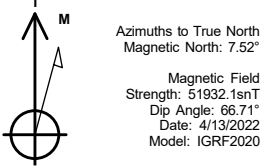
OWB

Plan: PROPOSAL 1

Standard Planning Report

19 April, 2022

Project: WELD COUNTY
Site: SEC 2-T5N-R62W
Well: STATE ANTELOPE W-C-3HN
Wellbore: OWB
Design: PROPOSAL 1



| WELL DETAILS: STATE ANTELOPE W-C-3HN | | | | | | |
|--------------------------------------|-------|------------|------------|-------------|--------------|------|
| 4646.00 | | | | | | |
| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
| 0.00 | 0.00 | 1402468.01 | 3334367.56 | 40.431960°N | 104.298840°W | |

| ANNOTATIONS | | | | | | | | | |
|-------------|-------|--------|---------|----------|----------|---------|-----------|----------------------------------|--|
| MD | Inc | Azi | TVD | +N/-S | +E/-W | VSec | Departure | Annotation | |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | Start Build 2.00 | |
| 566.69 | 9.33 | 177.31 | 564.63 | -37.89 | 1.78 | 5.53 | 37.93 | Start 5042.46 hold at 566.69 MD | |
| 5609.15 | 9.33 | 177.31 | 5540.32 | -854.80 | 40.14 | 124.82 | 855.75 | Start DLS 10.00 TFO 92.03 | |
| 6512.48 | 90.00 | 269.37 | 6109.00 | -954.49 | -531.74 | 705.21 | 1450.08 | Start 4602.25 hold at 6512.48 MD | |
| 11114.73 | 90.00 | 269.37 | 6109.00 | -1004.97 | -5133.71 | 5231.16 | 6052.33 | TD at 11114.73 | |

| SECTION DETAILS | | | | | | | | | |
|-----------------|----------|-------|--------|---------|----------|----------|-------|--------|---------|
| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSec |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 566.69 | 9.33 | 177.31 | 564.63 | -37.89 | 1.78 | 2.00 | 177.31 | 5.53 |
| 4 | 5609.15 | 9.33 | 177.31 | 5540.32 | -854.80 | 40.14 | 0.00 | 0.00 | 124.82 |
| 5 | 6512.48 | 90.00 | 269.37 | 6109.00 | -954.49 | -531.74 | 10.00 | 92.03 | 705.21 |
| 6 | 11114.73 | 90.00 | 269.37 | 6109.00 | -1004.97 | -5133.71 | 0.00 | 0.00 | 5231.16 |

| DESIGN TARGET DETAILS | | | | | | | | | |
|--|---------|----------|----------|------------|------------|-------------|--------------|-------|--|
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape | |
| LP-STATE ANTELOPE W-C-3HN - plan hits target center | 6109.00 | -954.49 | -531.74 | 1401506.44 | 3333848.82 | 40.429340°N | 104.300750°W | Point | |
| PBHL-STATE ANTELOPE W-C-3HN - plan hits target center | 6109.00 | -1004.97 | -5133.71 | 1401393.64 | 3329248.13 | 40.429200°N | 104.317280°W | Point | |

SHL:
1748' FNL, 333' FWL
Sec 2-T5N-R62W

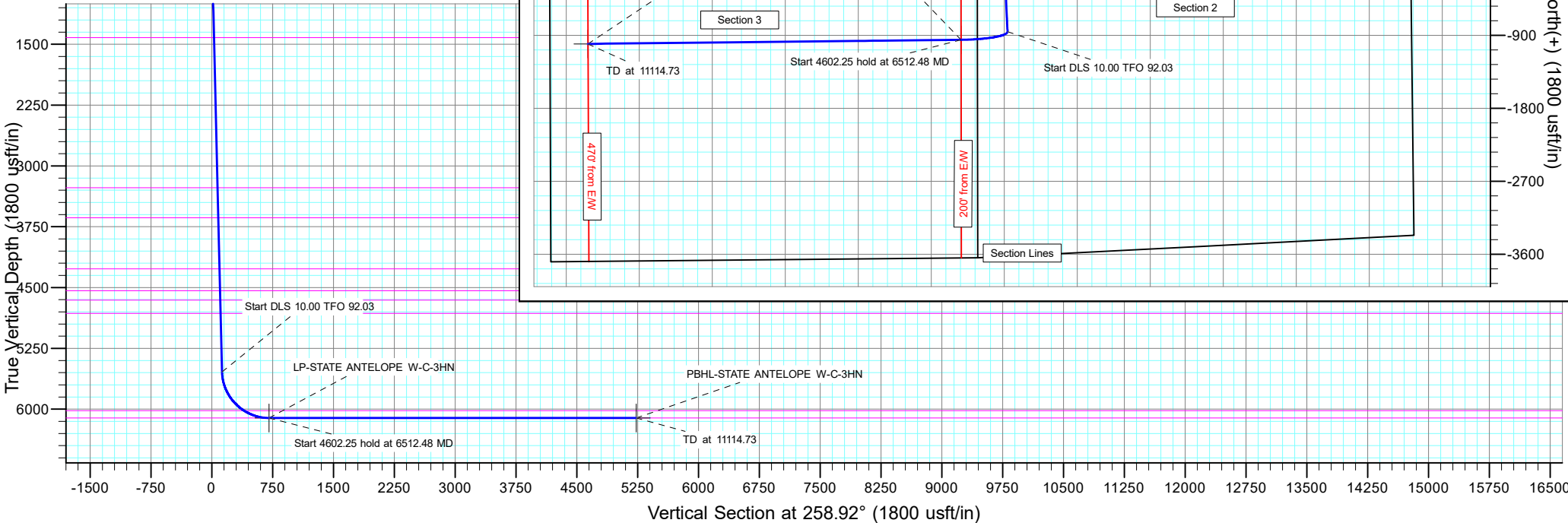
LP:
2691' FNL, 200' FEL
Sec 3-T5N-R62W

BHL:
2678' FNL, 470' FWL
Sec 3-T5N-R62W

PROJECT DETAILS: WELD COUNTY

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level



Planning Report

| | | | |
|------------------|------------------------|-------------------------------------|-----------------------------|
| Database: | EDT_32Bit_ODBC | Local Co-ordinate Reference: | Well STATE ANTELOPE W-C-3HN |
| Company: | BONANZA CREEK ENERGY | TVD Reference: | KB 24' @ 4670.00usft |
| Project: | WELD COUNTY | MD Reference: | KB 24' @ 4670.00usft |
| Site: | SEC 2-T5N-R62W | North Reference: | True |
| Well: | STATE ANTELOPE W-C-3HN | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OWB | | |
| Design: | PROPOSAL 1 | | |

| | | | |
|--------------------|---------------------------|----------------------|-----------------------------|
| Project | WELD COUNTY | | |
| 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 | | SEC 2-T5N-R62W | | | |
| Site Position: | | Northing: | 1,404,201.39 usft | Latitude: | 40.436731°N |
| From: | Lat/Long | Easting: | 3,334,009.19 usft | Longitude: | 104.300043°W |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13.200 in | Grid Convergence: | 0.78 ° |

| Well | STATE ANTELOPE W-C-3HN | | | | | |
|----------------------|------------------------|----------------|---------------------|-------------------|---------------|---------------|
| Well Position | +N/-S | -1,738.14 usft | Northing: | 1,402,468.01 usft | Latitude: | 40.431960°N |
| | +E/-W | 334.90 usft | Easting: | 3,334,367.57 usft | Longitude: | 104.298840°W |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | | Ground Level: | 4,646.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OWB | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2020 | 4/13/2022 | 7.52 | 66.71 | 51,932.10007776 |

| | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| Design | PROPOSAL 1 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
| | 0.00 | 0.00 | 0.00 | 258.92 |

| | | | | |
|---------------------------------|------------------------|--------------------------|------------------|---------------------|
| Plan Survey Tool Program | Date | 4/19/2022 | | |
| Depth From (usft) | Depth To (usft) | Survey (Wellbore) | Tool Name | Remarks |
| 1 | 0.00 | 11,114.73 | PROPOSAL 1 (OWB) | MWD OWSG |
| | | | | OWSG MWD - Standard |

| | | | | | | | | | | |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|------------------------------|-----------------------------|----------------------------|----------------|-------------------|
| Plan Sections | | | | | | | | | | |
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 566.69 | 9.33 | 177.31 | 564.63 | -37.89 | 1.78 | 2.00 | 2.00 | 0.00 | 177.31 | |
| 5,609.15 | 9.33 | 177.31 | 5,540.32 | -854.80 | 40.14 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,512.48 | 90.00 | 269.37 | 6,109.00 | -954.49 | -531.74 | 10.00 | 8.93 | 10.19 | 92.03 | LP-STATE ANTELOP |
| 11,114.73 | 90.00 | 269.37 | 6,109.00 | -1,004.97 | -5,133.71 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL-STATE ANTELI |

Planning Report

| | | | |
|------------------|------------------------|-------------------------------------|-----------------------------|
| Database: | EDT_32Bit_ODBC | Local Co-ordinate Reference: | Well STATE ANTELOPE W-C-3HN |
| Company: | BONANZA CREEK ENERGY | TVD Reference: | KB 24' @ 4670.00usft |
| Project: | WELD COUNTY | MD Reference: | KB 24' @ 4670.00usft |
| Site: | SEC 2-T5N-R62W | North Reference: | True |
| Well: | STATE ANTELOPE W-C-3HN | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OWB | | |
| Design: | PROPOSAL 1 | | |

| Planned Survey | | | | | | | | | |
|---------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 24.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Laramie-Fox Hills Formation | | | | | | | | | |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start Build 2.00 | | | | | | | | | |
| 200.00 | 2.00 | 177.31 | 199.98 | -1.74 | 0.08 | 0.25 | 2.00 | 2.00 | 0.00 |
| 249.07 | 2.98 | 177.31 | 249.00 | -3.87 | 0.18 | 0.57 | 2.00 | 2.00 | 0.00 |
| Pierre Formation | | | | | | | | | |
| 300.00 | 4.00 | 177.31 | 299.84 | -6.97 | 0.33 | 1.02 | 2.00 | 2.00 | 0.00 |
| 400.00 | 6.00 | 177.31 | 399.45 | -15.68 | 0.74 | 2.29 | 2.00 | 2.00 | 0.00 |
| 459.95 | 7.20 | 177.31 | 459.00 | -22.56 | 1.06 | 3.29 | 2.00 | 2.00 | 0.00 |
| Upper Pierre aquifer | | | | | | | | | |
| 500.00 | 8.00 | 177.31 | 498.70 | -27.85 | 1.31 | 4.07 | 2.00 | 2.00 | 0.00 |
| 566.69 | 9.33 | 177.31 | 564.63 | -37.89 | 1.78 | 5.53 | 2.00 | 2.00 | 0.00 |
| Start 5042.46 hold at 566.69 MD | | | | | | | | | |
| 600.00 | 9.33 | 177.31 | 597.50 | -43.28 | 2.03 | 6.32 | 0.00 | 0.00 | 0.00 |
| 700.00 | 9.33 | 177.31 | 696.17 | -59.48 | 2.79 | 8.69 | 0.00 | 0.00 | 0.00 |
| 800.00 | 9.33 | 177.31 | 794.85 | -75.69 | 3.55 | 11.05 | 0.00 | 0.00 | 0.00 |
| 900.00 | 9.33 | 177.31 | 893.53 | -91.89 | 4.32 | 13.42 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 9.33 | 177.31 | 992.20 | -108.09 | 5.08 | 15.78 | 0.00 | 0.00 | 0.00 |
| 1,100.00 | 9.33 | 177.31 | 1,090.88 | -124.29 | 5.84 | 18.15 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 9.33 | 177.31 | 1,189.55 | -140.49 | 6.60 | 20.51 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 9.33 | 177.31 | 1,288.23 | -156.69 | 7.36 | 22.88 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 9.33 | 177.31 | 1,386.91 | -172.89 | 8.12 | 25.25 | 0.00 | 0.00 | 0.00 |
| 1,432.53 | 9.33 | 177.31 | 1,419.00 | -178.16 | 8.37 | 26.02 | 0.00 | 0.00 | 0.00 |
| Base of Upper Pierre aquifer | | | | | | | | | |
| 1,500.00 | 9.33 | 177.31 | 1,485.58 | -189.09 | 8.88 | 27.61 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 9.33 | 177.31 | 1,584.26 | -205.29 | 9.64 | 29.98 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 9.33 | 177.31 | 1,682.93 | -221.49 | 10.40 | 32.34 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 9.33 | 177.31 | 1,781.61 | -237.69 | 11.16 | 34.71 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 9.33 | 177.31 | 1,880.29 | -253.89 | 11.92 | 37.07 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 9.33 | 177.31 | 1,978.96 | -270.09 | 12.68 | 39.44 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 9.33 | 177.31 | 2,077.64 | -286.30 | 13.44 | 41.81 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 9.33 | 177.31 | 2,176.31 | -302.50 | 14.21 | 44.17 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 9.33 | 177.31 | 2,274.99 | -318.70 | 14.97 | 46.54 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 9.33 | 177.31 | 2,373.67 | -334.90 | 15.73 | 48.90 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 9.33 | 177.31 | 2,472.34 | -351.10 | 16.49 | 51.27 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 9.33 | 177.31 | 2,571.02 | -367.30 | 17.25 | 53.63 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 9.33 | 177.31 | 2,669.69 | -383.50 | 18.01 | 56.00 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 9.33 | 177.31 | 2,768.37 | -399.70 | 18.77 | 58.37 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 9.33 | 177.31 | 2,867.05 | -415.90 | 19.53 | 60.73 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 9.33 | 177.31 | 2,965.72 | -432.10 | 20.29 | 63.10 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 9.33 | 177.31 | 3,064.40 | -448.30 | 21.05 | 65.46 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 9.33 | 177.31 | 3,163.07 | -464.50 | 21.81 | 67.83 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 9.33 | 177.31 | 3,261.75 | -480.70 | 22.57 | 70.19 | 0.00 | 0.00 | 0.00 |
| 3,307.35 | 9.33 | 177.31 | 3,269.00 | -481.90 | 22.63 | 70.37 | 0.00 | 0.00 | 0.00 |
| Larimer ("Parkman") sandstone | | | | | | | | | |
| 3,400.00 | 9.33 | 177.31 | 3,360.43 | -496.91 | 23.34 | 72.56 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 9.33 | 177.31 | 3,459.10 | -513.11 | 24.10 | 74.93 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 9.33 | 177.31 | 3,557.78 | -529.31 | 24.86 | 77.29 | 0.00 | 0.00 | 0.00 |
| 3,682.31 | 9.33 | 177.31 | 3,639.00 | -542.64 | 25.48 | 79.24 | 0.00 | 0.00 | 0.00 |
| Pierre Formation | | | | | | | | | |
| 3,700.00 | 9.33 | 177.31 | 3,656.45 | -545.51 | 25.62 | 79.66 | 0.00 | 0.00 | 0.00 |

Planning Report

| | | | |
|------------------|------------------------|-------------------------------------|-----------------------------|
| Database: | EDT_32Bit_ODBC | Local Co-ordinate Reference: | Well STATE ANTELOPE W-C-3HN |
| Company: | BONANZA CREEK ENERGY | TVD Reference: | KB 24' @ 4670.00usft |
| Project: | WELD COUNTY | MD Reference: | KB 24' @ 4670.00usft |
| Site: | SEC 2-T5N-R62W | North Reference: | True |
| Well: | STATE ANTELOPE W-C-3HN | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OWB | | |
| Design: | PROPOSAL 1 | | |

| Planned Survey | | | | | | | | | |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 3,800.00 | 9.33 | 177.31 | 3,755.13 | -561.71 | 26.38 | 82.02 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 9.33 | 177.31 | 3,853.81 | -577.91 | 27.14 | 84.39 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 9.33 | 177.31 | 3,952.48 | -594.11 | 27.90 | 86.75 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 9.33 | 177.31 | 4,051.16 | -610.31 | 28.66 | 89.12 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 9.33 | 177.31 | 4,149.83 | -626.51 | 29.42 | 91.49 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 9.33 | 177.31 | 4,248.51 | -642.71 | 30.18 | 93.85 | 0.00 | 0.00 | 0.00 |
| 4,320.76 | 9.33 | 177.31 | 4,269.00 | -646.08 | 30.34 | 94.34 | 0.00 | 0.00 | 0.00 |
| Terry ("Sussex") sandstone | | | | | | | | | |
| 4,400.00 | 9.33 | 177.31 | 4,347.19 | -658.91 | 30.94 | 96.22 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 9.33 | 177.31 | 4,445.86 | -675.11 | 31.70 | 98.58 | 0.00 | 0.00 | 0.00 |
| 4,594.39 | 9.33 | 177.31 | 4,539.00 | -690.41 | 32.42 | 100.82 | 0.00 | 0.00 | 0.00 |
| Pierre Formation | | | | | | | | | |
| 4,600.00 | 9.33 | 177.31 | 4,544.54 | -691.31 | 32.47 | 100.95 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 9.33 | 177.31 | 4,643.21 | -707.52 | 33.23 | 103.31 | 0.00 | 0.00 | 0.00 |
| 4,710.93 | 9.33 | 177.31 | 4,654.00 | -709.29 | 33.31 | 103.57 | 0.00 | 0.00 | 0.00 |
| Hygiene ("Shannon") sandstone | | | | | | | | | |
| 4,800.00 | 9.33 | 177.31 | 4,741.89 | -723.72 | 33.99 | 105.68 | 0.00 | 0.00 | 0.00 |
| 4,878.14 | 9.33 | 177.31 | 4,819.00 | -736.38 | 34.58 | 107.53 | 0.00 | 0.00 | 0.00 |
| Pierre Formation | | | | | | | | | |
| 4,900.00 | 9.33 | 177.31 | 4,840.57 | -739.92 | 34.75 | 108.05 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 9.33 | 177.31 | 4,939.24 | -756.12 | 35.51 | 110.41 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 9.33 | 177.31 | 5,037.92 | -772.32 | 36.27 | 112.78 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 9.33 | 177.31 | 5,136.59 | -788.52 | 37.03 | 115.14 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 9.33 | 177.31 | 5,235.27 | -804.72 | 37.79 | 117.51 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 9.33 | 177.31 | 5,333.95 | -820.92 | 38.55 | 119.87 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 9.33 | 177.31 | 5,432.62 | -837.12 | 39.31 | 122.24 | 0.00 | 0.00 | 0.00 |
| 5,609.15 | 9.33 | 177.31 | 5,540.32 | -854.80 | 40.14 | 124.82 | 0.00 | 0.00 | 0.00 |
| Start DLS 10.00 TFO 92.03 | | | | | | | | | |
| 5,650.00 | 10.05 | 201.40 | 5,580.61 | -861.43 | 39.00 | 127.22 | 10.00 | 1.75 | 58.95 |
| 5,700.00 | 12.76 | 222.90 | 5,629.64 | -869.55 | 33.64 | 134.03 | 10.00 | 5.43 | 43.00 |
| 5,750.00 | 16.57 | 235.85 | 5,678.02 | -877.60 | 23.98 | 145.07 | 10.00 | 7.60 | 25.92 |
| 5,800.00 | 20.87 | 243.85 | 5,725.37 | -885.53 | 10.08 | 160.23 | 10.00 | 8.60 | 15.99 |
| 5,850.00 | 25.42 | 249.15 | 5,771.34 | -893.28 | -7.96 | 179.42 | 10.00 | 9.10 | 10.60 |
| 5,900.00 | 30.10 | 252.91 | 5,815.57 | -900.79 | -29.98 | 202.48 | 10.00 | 9.37 | 7.52 |
| 5,950.00 | 34.87 | 255.74 | 5,857.74 | -908.00 | -55.84 | 229.23 | 10.00 | 9.53 | 5.65 |
| 6,000.00 | 39.69 | 257.95 | 5,897.52 | -914.85 | -85.32 | 259.49 | 10.00 | 9.63 | 4.44 |
| 6,050.00 | 44.54 | 259.76 | 5,934.60 | -921.31 | -118.21 | 293.00 | 10.00 | 9.70 | 3.61 |
| 6,100.00 | 49.41 | 261.28 | 5,968.70 | -927.30 | -154.25 | 329.53 | 10.00 | 9.75 | 3.04 |
| 6,150.00 | 54.30 | 262.59 | 5,999.58 | -932.80 | -193.18 | 368.78 | 10.00 | 9.78 | 2.62 |
| 6,184.75 | 57.71 | 263.41 | 6,019.00 | -936.31 | -221.77 | 397.52 | 10.00 | 9.81 | 2.36 |
| Sharon Springs Member | | | | | | | | | |
| 6,200.00 | 59.21 | 263.75 | 6,026.98 | -937.76 | -234.69 | 410.47 | 10.00 | 9.82 | 2.23 |
| 6,250.00 | 64.12 | 264.80 | 6,050.70 | -942.14 | -278.47 | 454.27 | 10.00 | 9.83 | 2.09 |
| 6,300.00 | 69.05 | 265.77 | 6,070.56 | -945.90 | -324.18 | 499.86 | 10.00 | 9.84 | 1.93 |
| 6,350.00 | 73.97 | 266.67 | 6,086.42 | -949.02 | -371.48 | 546.88 | 10.00 | 9.85 | 1.80 |
| 6,400.00 | 78.90 | 267.53 | 6,098.14 | -951.48 | -420.01 | 594.97 | 10.00 | 9.86 | 1.72 |
| 6,450.00 | 83.83 | 268.35 | 6,105.64 | -953.26 | -469.39 | 643.78 | 10.00 | 9.86 | 1.66 |
| 6,500.00 | 88.77 | 269.17 | 6,108.87 | -954.33 | -519.26 | 692.93 | 10.00 | 9.87 | 1.63 |
| 6,512.48 | 90.00 | 269.37 | 6,109.00 | -954.49 | -531.74 | 705.21 | 10.00 | 9.87 | 1.62 |
| Start 4602.25 hold at 6512.48 MD - Niobrara Formation | | | | | | | | | |
| 6,600.00 | 90.00 | 269.37 | 6,109.00 | -955.45 | -619.25 | 791.27 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 90.00 | 269.37 | 6,109.00 | -956.55 | -719.25 | 889.62 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 90.00 | 269.37 | 6,109.00 | -957.64 | -819.24 | 987.96 | 0.00 | 0.00 | 0.00 |

Planning Report

| | | | |
|------------------|------------------------|-------------------------------------|-----------------------------|
| Database: | EDT_32Bit_ODBC | Local Co-ordinate Reference: | Well STATE ANTELOPE W-C-3HN |
| Company: | BONANZA CREEK ENERGY | TVD Reference: | KB 24' @ 4670.00usft |
| Project: | WELD COUNTY | MD Reference: | KB 24' @ 4670.00usft |
| Site: | SEC 2-T5N-R62W | North Reference: | True |
| Well: | STATE ANTELOPE W-C-3HN | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OWB | | |
| Design: | PROPOSAL 1 | | |

| Planned Survey | | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | |
| 6,900.00 | 90.00 | 269.37 | 6,109.00 | -958.74 | -919.24 | 1,086.30 | 0.00 | 0.00 | 0.00 | |
| 7,000.00 | 90.00 | 269.37 | 6,109.00 | -959.84 | -1,019.23 | 1,184.64 | 0.00 | 0.00 | 0.00 | |
| 7,100.00 | 90.00 | 269.37 | 6,109.00 | -960.93 | -1,119.22 | 1,282.98 | 0.00 | 0.00 | 0.00 | |
| 7,200.00 | 90.00 | 269.37 | 6,109.00 | -962.03 | -1,219.22 | 1,381.33 | 0.00 | 0.00 | 0.00 | |
| 7,300.00 | 90.00 | 269.37 | 6,109.00 | -963.13 | -1,319.21 | 1,479.67 | 0.00 | 0.00 | 0.00 | |
| 7,400.00 | 90.00 | 269.37 | 6,109.00 | -964.22 | -1,419.21 | 1,578.01 | 0.00 | 0.00 | 0.00 | |
| 7,500.00 | 90.00 | 269.37 | 6,109.00 | -965.32 | -1,519.20 | 1,676.35 | 0.00 | 0.00 | 0.00 | |
| 7,600.00 | 90.00 | 269.37 | 6,109.00 | -966.42 | -1,619.19 | 1,774.69 | 0.00 | 0.00 | 0.00 | |
| 7,700.00 | 90.00 | 269.37 | 6,109.00 | -967.52 | -1,719.19 | 1,873.04 | 0.00 | 0.00 | 0.00 | |
| 7,800.00 | 90.00 | 269.37 | 6,109.00 | -968.61 | -1,819.18 | 1,971.38 | 0.00 | 0.00 | 0.00 | |
| 7,900.00 | 90.00 | 269.37 | 6,109.00 | -969.71 | -1,919.18 | 2,069.72 | 0.00 | 0.00 | 0.00 | |
| 8,000.00 | 90.00 | 269.37 | 6,109.00 | -970.81 | -2,019.17 | 2,168.06 | 0.00 | 0.00 | 0.00 | |
| 8,100.00 | 90.00 | 269.37 | 6,109.00 | -971.90 | -2,119.16 | 2,266.40 | 0.00 | 0.00 | 0.00 | |
| 8,200.00 | 90.00 | 269.37 | 6,109.00 | -973.00 | -2,219.16 | 2,364.75 | 0.00 | 0.00 | 0.00 | |
| 8,300.00 | 90.00 | 269.37 | 6,109.00 | -974.10 | -2,319.15 | 2,463.09 | 0.00 | 0.00 | 0.00 | |
| 8,400.00 | 90.00 | 269.37 | 6,109.00 | -975.19 | -2,419.15 | 2,561.43 | 0.00 | 0.00 | 0.00 | |
| 8,500.00 | 90.00 | 269.37 | 6,109.00 | -976.29 | -2,519.14 | 2,659.77 | 0.00 | 0.00 | 0.00 | |
| 8,600.00 | 90.00 | 269.37 | 6,109.00 | -977.39 | -2,619.13 | 2,758.12 | 0.00 | 0.00 | 0.00 | |
| 8,700.00 | 90.00 | 269.37 | 6,109.00 | -978.48 | -2,719.13 | 2,856.46 | 0.00 | 0.00 | 0.00 | |
| 8,800.00 | 90.00 | 269.37 | 6,109.00 | -979.58 | -2,819.12 | 2,954.80 | 0.00 | 0.00 | 0.00 | |
| 8,900.00 | 90.00 | 269.37 | 6,109.00 | -980.68 | -2,919.12 | 3,053.14 | 0.00 | 0.00 | 0.00 | |
| 9,000.00 | 90.00 | 269.37 | 6,109.00 | -981.77 | -3,019.11 | 3,151.48 | 0.00 | 0.00 | 0.00 | |
| 9,100.00 | 90.00 | 269.37 | 6,109.00 | -982.87 | -3,119.10 | 3,249.83 | 0.00 | 0.00 | 0.00 | |
| 9,200.00 | 90.00 | 269.37 | 6,109.00 | -983.97 | -3,219.10 | 3,348.17 | 0.00 | 0.00 | 0.00 | |
| 9,300.00 | 90.00 | 269.37 | 6,109.00 | -985.06 | -3,319.09 | 3,446.51 | 0.00 | 0.00 | 0.00 | |
| 9,400.00 | 90.00 | 269.37 | 6,109.00 | -986.16 | -3,419.09 | 3,544.85 | 0.00 | 0.00 | 0.00 | |
| 9,500.00 | 90.00 | 269.37 | 6,109.00 | -987.26 | -3,519.08 | 3,643.19 | 0.00 | 0.00 | 0.00 | |
| 9,600.00 | 90.00 | 269.37 | 6,109.00 | -988.35 | -3,619.07 | 3,741.54 | 0.00 | 0.00 | 0.00 | |
| 9,700.00 | 90.00 | 269.37 | 6,109.00 | -989.45 | -3,719.07 | 3,839.88 | 0.00 | 0.00 | 0.00 | |
| 9,800.00 | 90.00 | 269.37 | 6,109.00 | -990.55 | -3,819.06 | 3,938.22 | 0.00 | 0.00 | 0.00 | |
| 9,900.00 | 90.00 | 269.37 | 6,109.00 | -991.64 | -3,919.06 | 4,036.56 | 0.00 | 0.00 | 0.00 | |
| 10,000.00 | 90.00 | 269.37 | 6,109.00 | -992.74 | -4,019.05 | 4,134.90 | 0.00 | 0.00 | 0.00 | |
| 10,100.00 | 90.00 | 269.37 | 6,109.00 | -993.84 | -4,119.04 | 4,233.25 | 0.00 | 0.00 | 0.00 | |
| 10,200.00 | 90.00 | 269.37 | 6,109.00 | -994.93 | -4,219.04 | 4,331.59 | 0.00 | 0.00 | 0.00 | |
| 10,300.00 | 90.00 | 269.37 | 6,109.00 | -996.03 | -4,319.03 | 4,429.93 | 0.00 | 0.00 | 0.00 | |
| 10,400.00 | 90.00 | 269.37 | 6,109.00 | -997.13 | -4,419.03 | 4,528.27 | 0.00 | 0.00 | 0.00 | |
| 10,500.00 | 90.00 | 269.37 | 6,109.00 | -998.22 | -4,519.02 | 4,626.62 | 0.00 | 0.00 | 0.00 | |
| 10,600.00 | 90.00 | 269.37 | 6,109.00 | -999.32 | -4,619.01 | 4,724.96 | 0.00 | 0.00 | 0.00 | |
| 10,700.00 | 90.00 | 269.37 | 6,109.00 | -1,000.42 | -4,719.01 | 4,823.30 | 0.00 | 0.00 | 0.00 | |
| 10,800.00 | 90.00 | 269.37 | 6,109.00 | -1,001.51 | -4,819.00 | 4,921.64 | 0.00 | 0.00 | 0.00 | |
| 10,900.00 | 90.00 | 269.37 | 6,109.00 | -1,002.61 | -4,919.00 | 5,019.98 | 0.00 | 0.00 | 0.00 | |
| 11,000.00 | 90.00 | 269.37 | 6,109.00 | -1,003.71 | -5,018.99 | 5,118.33 | 0.00 | 0.00 | 0.00 | |
| 11,100.00 | 90.00 | 269.37 | 6,109.00 | -1,004.81 | -5,118.98 | 5,216.67 | 0.00 | 0.00 | 0.00 | |
| 11,114.73 | 90.00 | 269.37 | 6,109.00 | -1,004.97 | -5,133.71 | 5,231.16 | 0.00 | 0.00 | 0.00 | |
| TD at 11114.73 | | | | | | | | | | |

Planning Report

| | | | |
|------------------|------------------------|-------------------------------------|-----------------------------|
| Database: | EDT_32Bit_ODBC | Local Co-ordinate Reference: | Well STATE ANTELOPE W-C-3HN |
| Company: | BONANZA CREEK ENERGY | TVD Reference: | KB 24' @ 4670.00usft |
| Project: | WELD COUNTY | MD Reference: | KB 24' @ 4670.00usft |
| Site: | SEC 2-T5N-R62W | North Reference: | True |
| Well: | STATE ANTELOPE W-C-3HN | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OWB | | |
| Design: | PROPOSAL 1 | | |

| Design Targets | | | | | | | | | |
|--|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-------------|--------------|
| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| PBHL-STATE ANTELOP - plan hits target center - Point | 0.00 | 0.00 | 6,109.00 | -1,004.97 | -5,133.71 | 1,401,393.64 | 3,329,248.13 | 40.429200°N | 104.317280°W |
| LP-STATE ANTELOPE \ | 0.00 | 0.00 | 6,109.00 | -954.49 | -531.74 | 1,401,506.44 | 3,333,848.82 | 40.429340°N | 104.300750°W |
| - plan hits target center - Point | | | | | | | | | |

| Formations | | | | | |
|--------------------------|--------------------------|-------------------------------|-----------|------------|----------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 24.00 | 24.00 | Laramie-Fox Hills Formation | | | |
| 249.07 | 249.00 | Pierre Formation | | | |
| 459.95 | 459.00 | Upper Pierre aquifer | | | |
| 1,432.53 | 1,419.00 | Base of Upper Pierre aquifer | | | |
| 3,307.35 | 3,269.00 | Larimer ("Parkman") sandstone | | | |
| 3,682.31 | 3,639.00 | Pierre Formation | | | |
| 4,320.76 | 4,269.00 | Terry ("Sussex") sandstone | | | |
| 4,594.39 | 4,539.00 | Pierre Formation | | | |
| 4,710.93 | 4,654.00 | Hygiene ("Shannon") sandstone | | | |
| 4,878.14 | 4,819.00 | Pierre Formation | | | |
| 6,184.75 | 6,019.00 | Sharon Springs Member | | | |
| 6,512.48 | 6,109.00 | Niobrara Formation | | | |

| Plan Annotations | | | | |
|--------------------------|--------------------------|-------------------|-----------------|----------------------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
| | | +N/-S (usft) | +E/-W (usft) | |
| 100.00 | 100.00 | 0.00 | 0.00 | Start Build 2.00 |
| 566.69 | 564.63 | -37.89 | 1.78 | Start 5042.46 hold at 566.69 MD |
| 5,609.15 | 5,540.32 | -854.80 | 40.14 | Start DLS 10.00 TFO 92.03 |
| 6,512.48 | 6,109.00 | -954.49 | -531.74 | Start 4602.25 hold at 6512.48 MD |
| 11,114.73 | 6,109.00 | -1,004.97 | -5,133.71 | TD at 11114.73 |