

BONANZA CREEK ENERGY

WELD COUNTY

SEC 2-T5N-R62W

STATE ANTELOPE C13-W43-2HN

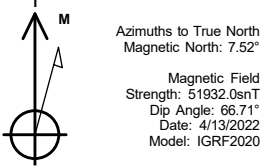
OWB

Plan: PROPOSAL 1

Standard Planning Report

19 April, 2022

Project: WELD COUNTY
Site: SEC 2-T5N-R62W
Well: STATE ANTELOPE C13-W43-2HN
Wellbore: OWB
Design: PROPOSAL 1



WELL DETAILS: STATE ANTELOPE C13-W43-2HN

| 4646.00 | | | | | | |
|---------|-------|------------|------------|-------------|--------------|------|
| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
| 0.00 | 0.00 | 1402427.94 | 3334368.11 | 40.431850°N | 104.298840°W | |

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSec | Target |
|-----|----------|-------|--------|---------|----------|---------|-------|---------|---------|-------------------------------|
| 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 | 1029.17 | 18.58 | 205.27 | 1012.97 | -135.08 | -63.76 | 2.00 | 205.27 | -19.28 | |
| 4 | 5740.73 | 18.58 | 205.27 | 5478.87 | -1492.93 | -704.67 | 0.00 | 0.00 | -213.09 | |
| 5 | 6725.60 | 90.00 | 87.68 | 6109.00 | -1657.62 | -130.85 | 10.00 | -116.35 | 383.59 | LP-STATE ANTELOPE C13-W43-2 |
| 6 | 11417.81 | 90.00 | 87.68 | 6109.00 | -1467.76 | 4557.52 | 0.00 | 0.00 | 4788.03 | PBHL-STATE ANTELOPE C13-W43-2 |

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 |
| 1029.17 | 18.58 | 205.27 | 1012.97 | -135.08 | -63.76 | -19.28 | 149.37 | Start 4711.56 hold at 1029.17 MD |
| 5740.73 | 18.58 | 205.27 | 5478.87 | -1492.93 | -704.67 | -213.09 | 1650.88 | Start DLS 10.00 TFO -116.35 |
| 6725.60 | 90.00 | 87.68 | 6109.00 | -1657.62 | -130.85 | 383.59 | 2300.65 | Start 4692.21 hold at 6725.60 MD |
| 11417.81 | 90.00 | 87.68 | 6109.00 | -1467.76 | 4557.52 | 4788.03 | 6992.86 | TD at 11417.81 |

DESIGN TARGET DETAILS

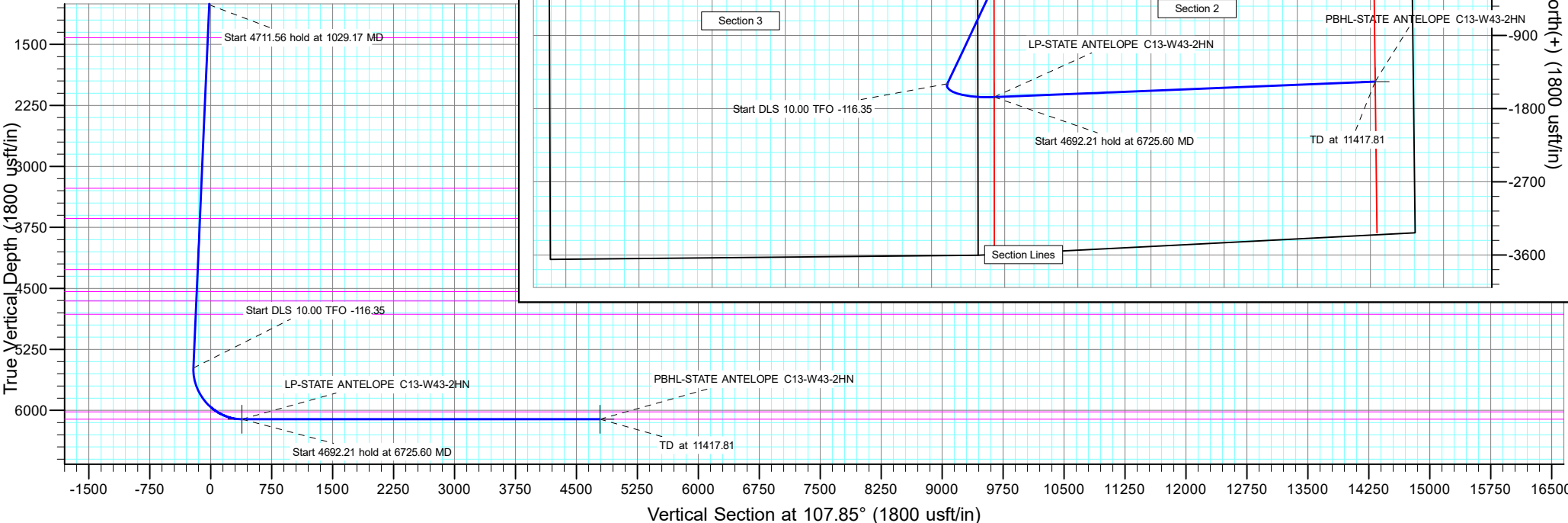
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|--|---------|----------|---------|------------|------------|-------------|--------------|-------|
| LP-STATE ANTELOPE C13-W43-2HN - plan hits target center | 6109.00 | -1657.62 | -130.85 | 1400768.76 | 3334259.72 | 40.427300°N | 104.299310°W | Point |
| PBHL-STATE ANTELOPE C13-W43-2HN - plan hits target center | 6109.00 | -1467.76 | 4557.52 | 1401022.10 | 3338944.91 | 40.427820°N | 104.282470°W | Point |

SHL:
1788' FNL, 333' FWL
Sec 2-T5N-R62W

LP:
1935' FSL, 200' FWL
Sec 2-T5N-R62W

BHL:
1883' FSL, 470' FEL
Sec 2-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 C13-W43-2HN |
| 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 C13-W43-2HN | 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 C13-W43-2HN | | | | | |
|----------------------|----------------------------|----------------|---------------------|-------------------|---------------|---------------|
| Well Position | +N/-S | -1,778.22 usft | Northing: | 1,402,427.94 usft | Latitude: | 40.431850°N |
| | +E/-W | 334.90 usft | Easting: | 3,334,368.11 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 | 51,932.04282173 |

| | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| 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 | 107.85 |

| | | | | |
|---------------------------------|------------------------|--------------------------|------------------|---------------------|
| Plan Survey Tool Program | Date | 4/19/2022 | | |
| Depth From (usft) | Depth To (usft) | Survey (Wellbore) | Tool Name | Remarks |
| 1 | 0.00 | 11,417.81 | 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 | |
| 1,029.17 | 18.58 | 205.27 | 1,012.97 | -135.08 | -63.76 | 2.00 | 2.00 | 0.00 | 205.27 | |
| 5,740.73 | 18.58 | 205.27 | 5,478.87 | -1,492.93 | -704.67 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,725.60 | 90.00 | 87.68 | 6,109.00 | -1,657.62 | -130.85 | 10.00 | 7.25 | -11.94 | -116.35 | LP-STATE ANTELOP |
| 11,417.81 | 90.00 | 87.68 | 6,109.00 | -1,467.76 | 4,557.52 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL-STATE ANTELI |

Planning Report

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|------------------|----------------------------|-------------------------------------|---------------------------------|
| Database: | EDT_32Bit_ODBC | Local Co-ordinate Reference: | Well STATE ANTELOPE C13-W43-2HN |
| 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 C13-W43-2HN | 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 | 205.27 | 199.98 | -1.58 | -0.74 | -0.23 | 2.00 | 2.00 | 0.00 |
| 249.07 | 2.98 | 205.27 | 249.00 | -3.51 | -1.66 | -0.50 | 2.00 | 2.00 | 0.00 |
| Pierre Formation | | | | | | | | | |
| 300.00 | 4.00 | 205.27 | 299.84 | -6.31 | -2.98 | -0.90 | 2.00 | 2.00 | 0.00 |
| 400.00 | 6.00 | 205.27 | 399.45 | -14.19 | -6.70 | -2.03 | 2.00 | 2.00 | 0.00 |
| 459.95 | 7.20 | 205.27 | 459.00 | -20.42 | -9.64 | -2.91 | 2.00 | 2.00 | 0.00 |
| Upper Pierre aquifer | | | | | | | | | |
| 500.00 | 8.00 | 205.27 | 498.70 | -25.21 | -11.90 | -3.60 | 2.00 | 2.00 | 0.00 |
| 600.00 | 10.00 | 205.27 | 597.47 | -39.36 | -18.58 | -5.62 | 2.00 | 2.00 | 0.00 |
| 700.00 | 12.00 | 205.27 | 695.62 | -56.61 | -26.72 | -8.08 | 2.00 | 2.00 | 0.00 |
| 800.00 | 14.00 | 205.27 | 793.06 | -76.96 | -36.32 | -10.98 | 2.00 | 2.00 | 0.00 |
| 900.00 | 16.00 | 205.27 | 889.64 | -100.36 | -47.37 | -14.32 | 2.00 | 2.00 | 0.00 |
| 1,000.00 | 18.00 | 205.27 | 985.27 | -126.80 | -59.85 | -18.10 | 2.00 | 2.00 | 0.00 |
| 1,029.17 | 18.58 | 205.27 | 1,012.97 | -135.08 | -63.76 | -19.28 | 2.00 | 2.00 | 0.00 |
| Start 4711.56 hold at 1029.17 MD | | | | | | | | | |
| 1,100.00 | 18.58 | 205.27 | 1,080.10 | -155.49 | -73.39 | -22.19 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 18.58 | 205.27 | 1,174.89 | -184.31 | -86.99 | -26.31 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 18.58 | 205.27 | 1,269.67 | -213.13 | -100.60 | -30.42 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 18.58 | 205.27 | 1,364.46 | -241.95 | -114.20 | -34.53 | 0.00 | 0.00 | 0.00 |
| 1,457.54 | 18.58 | 205.27 | 1,419.00 | -258.53 | -122.03 | -36.90 | 0.00 | 0.00 | 0.00 |
| Base of Upper Pierre aquifer | | | | | | | | | |
| 1,500.00 | 18.58 | 205.27 | 1,459.25 | -270.77 | -127.80 | -38.65 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 18.58 | 205.27 | 1,554.03 | -299.59 | -141.41 | -42.76 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 18.58 | 205.27 | 1,648.82 | -328.41 | -155.01 | -46.87 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 18.58 | 205.27 | 1,743.60 | -357.23 | -168.61 | -50.99 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 18.58 | 205.27 | 1,838.39 | -386.05 | -182.22 | -55.10 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 18.58 | 205.27 | 1,933.18 | -414.87 | -195.82 | -59.21 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 18.58 | 205.27 | 2,027.96 | -443.69 | -209.42 | -63.33 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 18.58 | 205.27 | 2,122.75 | -472.51 | -223.02 | -67.44 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 18.58 | 205.27 | 2,217.53 | -501.33 | -236.63 | -71.56 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 18.58 | 205.27 | 2,312.32 | -530.14 | -250.23 | -75.67 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 18.58 | 205.27 | 2,407.11 | -558.96 | -263.83 | -79.78 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 18.58 | 205.27 | 2,501.89 | -587.78 | -277.44 | -83.90 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 18.58 | 205.27 | 2,596.68 | -616.60 | -291.04 | -88.01 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 18.58 | 205.27 | 2,691.46 | -645.42 | -304.64 | -92.12 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 18.58 | 205.27 | 2,786.25 | -674.24 | -318.25 | -96.24 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 18.58 | 205.27 | 2,881.04 | -703.06 | -331.85 | -100.35 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 18.58 | 205.27 | 2,975.82 | -731.88 | -345.45 | -104.46 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 18.58 | 205.27 | 3,070.61 | -760.70 | -359.05 | -108.58 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 18.58 | 205.27 | 3,165.39 | -789.52 | -372.66 | -112.69 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 18.58 | 205.27 | 3,260.18 | -818.34 | -386.26 | -116.80 | 0.00 | 0.00 | 0.00 |
| 3,409.31 | 18.58 | 205.27 | 3,269.00 | -821.02 | -387.53 | -117.19 | 0.00 | 0.00 | 0.00 |
| Larimer ("Parkman") sandstone | | | | | | | | | |
| 3,500.00 | 18.58 | 205.27 | 3,354.97 | -847.16 | -399.86 | -120.92 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 18.58 | 205.27 | 3,449.75 | -875.98 | -413.47 | -125.03 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 18.58 | 205.27 | 3,544.54 | -904.80 | -427.07 | -129.14 | 0.00 | 0.00 | 0.00 |
| 3,799.66 | 18.58 | 205.27 | 3,639.00 | -933.52 | -440.63 | -133.24 | 0.00 | 0.00 | 0.00 |
| Pierre Formation | | | | | | | | | |

Planning Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Database: | EDT_32Bit_ODBC | Local Co-ordinate Reference: | Well STATE ANTELOPE C13-W43-2HN |
| 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 C13-W43-2HN | 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 | 18.58 | 205.27 | 3,639.32 | -933.62 | -440.67 | -133.26 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 18.58 | 205.27 | 3,734.11 | -962.44 | -454.27 | -137.37 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 18.58 | 205.27 | 3,828.90 | -991.26 | -467.88 | -141.48 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 18.58 | 205.27 | 3,923.68 | -1,020.08 | -481.48 | -145.60 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 18.58 | 205.27 | 4,018.47 | -1,048.90 | -495.08 | -149.71 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 18.58 | 205.27 | 4,113.25 | -1,077.72 | -508.69 | -153.83 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 18.58 | 205.27 | 4,208.04 | -1,106.54 | -522.29 | -157.94 | 0.00 | 0.00 | 0.00 |
| 4,464.31 | 18.58 | 205.27 | 4,269.00 | -1,125.07 | -531.04 | -160.58 | 0.00 | 0.00 | 0.00 |
| Terry ("Sussex") sandstone | | | | | | | | | |
| 4,500.00 | 18.58 | 205.27 | 4,302.83 | -1,135.36 | -535.89 | -162.05 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 18.58 | 205.27 | 4,397.61 | -1,164.18 | -549.50 | -166.17 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 18.58 | 205.27 | 4,492.40 | -1,192.99 | -563.10 | -170.28 | 0.00 | 0.00 | 0.00 |
| 4,749.17 | 18.58 | 205.27 | 4,539.00 | -1,207.16 | -569.79 | -172.30 | 0.00 | 0.00 | 0.00 |
| Pierre Formation | | | | | | | | | |
| 4,800.00 | 18.58 | 205.27 | 4,587.18 | -1,221.81 | -576.70 | -174.39 | 0.00 | 0.00 | 0.00 |
| 4,870.49 | 18.58 | 205.27 | 4,654.00 | -1,242.13 | -586.29 | -177.29 | 0.00 | 0.00 | 0.00 |
| Hygiene ("Shannon") sandstone | | | | | | | | | |
| 4,900.00 | 18.58 | 205.27 | 4,681.97 | -1,250.63 | -590.30 | -178.51 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 18.58 | 205.27 | 4,776.76 | -1,279.45 | -603.91 | -182.62 | 0.00 | 0.00 | 0.00 |
| 5,044.57 | 18.58 | 205.27 | 4,819.00 | -1,292.30 | -609.97 | -184.45 | 0.00 | 0.00 | 0.00 |
| Pierre Formation | | | | | | | | | |
| 5,100.00 | 18.58 | 205.27 | 4,871.54 | -1,308.27 | -617.51 | -186.73 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 18.58 | 205.27 | 4,966.33 | -1,337.09 | -631.11 | -190.85 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 18.58 | 205.27 | 5,061.11 | -1,365.91 | -644.72 | -194.96 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 18.58 | 205.27 | 5,155.90 | -1,394.73 | -658.32 | -199.07 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 18.58 | 205.27 | 5,250.69 | -1,423.55 | -671.92 | -203.19 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 18.58 | 205.27 | 5,345.47 | -1,452.37 | -685.52 | -207.30 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 18.58 | 205.27 | 5,440.26 | -1,481.19 | -699.13 | -211.41 | 0.00 | 0.00 | 0.00 |
| 5,740.73 | 18.58 | 205.27 | 5,478.87 | -1,492.93 | -704.67 | -213.09 | 0.00 | 0.00 | 0.00 |
| Start DLS 10.00 TFO -116.35 | | | | | | | | | |
| 5,750.00 | 18.19 | 202.61 | 5,487.66 | -1,495.60 | -705.86 | -213.40 | 10.00 | -4.24 | -28.71 |
| 5,800.00 | 16.78 | 186.58 | 5,535.38 | -1,509.99 | -709.68 | -212.64 | 10.00 | -2.81 | -32.06 |
| 5,850.00 | 16.77 | 169.19 | 5,583.28 | -1,524.25 | -709.16 | -207.76 | 10.00 | -0.03 | -34.77 |
| 5,900.00 | 18.14 | 153.11 | 5,631.00 | -1,538.29 | -704.28 | -198.82 | 10.00 | 2.75 | -32.17 |
| 5,950.00 | 20.63 | 140.00 | 5,678.19 | -1,551.99 | -695.09 | -185.87 | 10.00 | 4.98 | -26.22 |
| 6,000.00 | 23.89 | 129.95 | 5,724.47 | -1,565.25 | -681.66 | -169.02 | 10.00 | 6.52 | -20.09 |
| 6,050.00 | 27.65 | 122.35 | 5,769.50 | -1,577.96 | -664.08 | -148.39 | 10.00 | 7.52 | -15.22 |
| 6,100.00 | 31.73 | 116.49 | 5,812.94 | -1,590.04 | -642.50 | -124.15 | 10.00 | 8.16 | -11.71 |
| 6,150.00 | 36.02 | 111.88 | 5,854.45 | -1,601.39 | -617.07 | -96.46 | 10.00 | 8.58 | -9.23 |
| 6,200.00 | 40.45 | 108.14 | 5,893.72 | -1,611.93 | -588.00 | -65.56 | 10.00 | 8.87 | -7.48 |
| 6,250.00 | 44.99 | 105.03 | 5,930.44 | -1,621.57 | -555.49 | -31.66 | 10.00 | 9.07 | -6.22 |
| 6,300.00 | 49.59 | 102.38 | 5,964.35 | -1,630.23 | -519.81 | 4.96 | 10.00 | 9.21 | -5.30 |
| 6,350.00 | 54.25 | 100.07 | 5,995.18 | -1,637.86 | -481.21 | 44.04 | 10.00 | 9.32 | -4.62 |
| 6,392.90 | 58.28 | 98.29 | 6,019.00 | -1,643.54 | -446.00 | 79.30 | 10.00 | 9.39 | -4.13 |
| Sharon Springs Member | | | | | | | | | |
| 6,400.00 | 58.95 | 98.02 | 6,022.70 | -1,644.40 | -440.00 | 85.27 | 10.00 | 9.42 | -3.92 |
| 6,450.00 | 63.68 | 96.16 | 6,046.69 | -1,649.80 | -396.48 | 128.35 | 10.00 | 9.45 | -3.71 |
| 6,500.00 | 68.43 | 94.45 | 6,066.98 | -1,654.00 | -350.99 | 172.93 | 10.00 | 9.50 | -3.42 |
| 6,550.00 | 73.19 | 92.84 | 6,083.41 | -1,657.00 | -303.88 | 218.70 | 10.00 | 9.53 | -3.20 |
| 6,600.00 | 77.97 | 91.32 | 6,095.86 | -1,658.75 | -255.50 | 265.28 | 10.00 | 9.56 | -3.05 |
| 6,650.00 | 82.76 | 89.85 | 6,104.23 | -1,659.25 | -206.23 | 312.34 | 10.00 | 9.57 | -2.94 |
| 6,700.00 | 87.55 | 88.41 | 6,108.45 | -1,658.49 | -156.43 | 359.51 | 10.00 | 9.58 | -2.88 |
| 6,725.60 | 90.00 | 87.68 | 6,109.00 | -1,657.62 | -130.85 | 383.59 | 10.00 | 9.58 | -2.86 |

Planning Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Database: | EDT_32Bit_ODBC | Local Co-ordinate Reference: | Well STATE ANTELOPE C13-W43-2HN |
| 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 C13-W43-2HN | 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) | |
| Start 4692.21 hold at 6725.60 MD - Niobrara Formation | | | | | | | | | | |
| 6,800.00 | 90.00 | 87.68 | 6,109.00 | -1,654.61 | -56.51 | 453.42 | 0.00 | 0.00 | 0.00 | |
| 6,900.00 | 90.00 | 87.68 | 6,109.00 | -1,650.56 | 43.41 | 547.29 | 0.00 | 0.00 | 0.00 | |
| 7,000.00 | 90.00 | 87.68 | 6,109.00 | -1,646.52 | 143.32 | 641.16 | 0.00 | 0.00 | 0.00 | |
| 7,100.00 | 90.00 | 87.68 | 6,109.00 | -1,642.47 | 243.24 | 735.03 | 0.00 | 0.00 | 0.00 | |
| 7,200.00 | 90.00 | 87.68 | 6,109.00 | -1,638.42 | 343.16 | 828.89 | 0.00 | 0.00 | 0.00 | |
| 7,300.00 | 90.00 | 87.68 | 6,109.00 | -1,634.38 | 443.08 | 922.76 | 0.00 | 0.00 | 0.00 | |
| 7,400.00 | 90.00 | 87.68 | 6,109.00 | -1,630.33 | 543.00 | 1,016.63 | 0.00 | 0.00 | 0.00 | |
| 7,500.00 | 90.00 | 87.68 | 6,109.00 | -1,626.29 | 642.91 | 1,110.49 | 0.00 | 0.00 | 0.00 | |
| 7,600.00 | 90.00 | 87.68 | 6,109.00 | -1,622.24 | 742.83 | 1,204.36 | 0.00 | 0.00 | 0.00 | |
| 7,700.00 | 90.00 | 87.68 | 6,109.00 | -1,618.19 | 842.75 | 1,298.23 | 0.00 | 0.00 | 0.00 | |
| 7,800.00 | 90.00 | 87.68 | 6,109.00 | -1,614.15 | 942.67 | 1,392.10 | 0.00 | 0.00 | 0.00 | |
| 7,900.00 | 90.00 | 87.68 | 6,109.00 | -1,610.10 | 1,042.59 | 1,485.96 | 0.00 | 0.00 | 0.00 | |
| 8,000.00 | 90.00 | 87.68 | 6,109.00 | -1,606.05 | 1,142.50 | 1,579.83 | 0.00 | 0.00 | 0.00 | |
| 8,100.00 | 90.00 | 87.68 | 6,109.00 | -1,602.01 | 1,242.42 | 1,673.70 | 0.00 | 0.00 | 0.00 | |
| 8,200.00 | 90.00 | 87.68 | 6,109.00 | -1,597.96 | 1,342.34 | 1,767.56 | 0.00 | 0.00 | 0.00 | |
| 8,300.00 | 90.00 | 87.68 | 6,109.00 | -1,593.91 | 1,442.26 | 1,861.43 | 0.00 | 0.00 | 0.00 | |
| 8,400.00 | 90.00 | 87.68 | 6,109.00 | -1,589.87 | 1,542.18 | 1,955.30 | 0.00 | 0.00 | 0.00 | |
| 8,500.00 | 90.00 | 87.68 | 6,109.00 | -1,585.82 | 1,642.10 | 2,049.17 | 0.00 | 0.00 | 0.00 | |
| 8,600.00 | 90.00 | 87.68 | 6,109.00 | -1,581.78 | 1,742.01 | 2,143.03 | 0.00 | 0.00 | 0.00 | |
| 8,700.00 | 90.00 | 87.68 | 6,109.00 | -1,577.73 | 1,841.93 | 2,236.90 | 0.00 | 0.00 | 0.00 | |
| 8,800.00 | 90.00 | 87.68 | 6,109.00 | -1,573.68 | 1,941.85 | 2,330.77 | 0.00 | 0.00 | 0.00 | |
| 8,900.00 | 90.00 | 87.68 | 6,109.00 | -1,569.64 | 2,041.77 | 2,424.64 | 0.00 | 0.00 | 0.00 | |
| 9,000.00 | 90.00 | 87.68 | 6,109.00 | -1,565.59 | 2,141.69 | 2,518.50 | 0.00 | 0.00 | 0.00 | |
| 9,100.00 | 90.00 | 87.68 | 6,109.00 | -1,561.54 | 2,241.60 | 2,612.37 | 0.00 | 0.00 | 0.00 | |
| 9,200.00 | 90.00 | 87.68 | 6,109.00 | -1,557.50 | 2,341.52 | 2,706.24 | 0.00 | 0.00 | 0.00 | |
| 9,300.00 | 90.00 | 87.68 | 6,109.00 | -1,553.45 | 2,441.44 | 2,800.10 | 0.00 | 0.00 | 0.00 | |
| 9,400.00 | 90.00 | 87.68 | 6,109.00 | -1,549.41 | 2,541.36 | 2,893.97 | 0.00 | 0.00 | 0.00 | |
| 9,500.00 | 90.00 | 87.68 | 6,109.00 | -1,545.36 | 2,641.28 | 2,987.84 | 0.00 | 0.00 | 0.00 | |
| 9,600.00 | 90.00 | 87.68 | 6,109.00 | -1,541.31 | 2,741.19 | 3,081.71 | 0.00 | 0.00 | 0.00 | |
| 9,700.00 | 90.00 | 87.68 | 6,109.00 | -1,537.27 | 2,841.11 | 3,175.57 | 0.00 | 0.00 | 0.00 | |
| 9,800.00 | 90.00 | 87.68 | 6,109.00 | -1,533.22 | 2,941.03 | 3,269.44 | 0.00 | 0.00 | 0.00 | |
| 9,900.00 | 90.00 | 87.68 | 6,109.00 | -1,529.17 | 3,040.95 | 3,363.31 | 0.00 | 0.00 | 0.00 | |
| 10,000.00 | 90.00 | 87.68 | 6,109.00 | -1,525.13 | 3,140.87 | 3,457.17 | 0.00 | 0.00 | 0.00 | |
| 10,100.00 | 90.00 | 87.68 | 6,109.00 | -1,521.08 | 3,240.78 | 3,551.04 | 0.00 | 0.00 | 0.00 | |
| 10,200.00 | 90.00 | 87.68 | 6,109.00 | -1,517.03 | 3,340.70 | 3,644.91 | 0.00 | 0.00 | 0.00 | |
| 10,300.00 | 90.00 | 87.68 | 6,109.00 | -1,512.99 | 3,440.62 | 3,738.78 | 0.00 | 0.00 | 0.00 | |
| 10,400.00 | 90.00 | 87.68 | 6,109.00 | -1,508.94 | 3,540.54 | 3,832.64 | 0.00 | 0.00 | 0.00 | |
| 10,500.00 | 90.00 | 87.68 | 6,109.00 | -1,504.90 | 3,640.46 | 3,926.51 | 0.00 | 0.00 | 0.00 | |
| 10,600.00 | 90.00 | 87.68 | 6,109.00 | -1,500.85 | 3,740.38 | 4,020.38 | 0.00 | 0.00 | 0.00 | |
| 10,700.00 | 90.00 | 87.68 | 6,109.00 | -1,496.80 | 3,840.29 | 4,114.24 | 0.00 | 0.00 | 0.00 | |
| 10,800.00 | 90.00 | 87.68 | 6,109.00 | -1,492.76 | 3,940.21 | 4,208.11 | 0.00 | 0.00 | 0.00 | |
| 10,900.00 | 90.00 | 87.68 | 6,109.00 | -1,488.71 | 4,040.13 | 4,301.98 | 0.00 | 0.00 | 0.00 | |
| 11,000.00 | 90.00 | 87.68 | 6,109.00 | -1,484.66 | 4,140.05 | 4,395.85 | 0.00 | 0.00 | 0.00 | |
| 11,100.00 | 90.00 | 87.68 | 6,109.00 | -1,480.62 | 4,239.97 | 4,489.71 | 0.00 | 0.00 | 0.00 | |
| 11,200.00 | 90.00 | 87.68 | 6,109.00 | -1,476.57 | 4,339.88 | 4,583.58 | 0.00 | 0.00 | 0.00 | |
| 11,300.00 | 90.00 | 87.68 | 6,109.00 | -1,472.52 | 4,439.80 | 4,677.45 | 0.00 | 0.00 | 0.00 | |
| 11,400.00 | 90.00 | 87.68 | 6,109.00 | -1,468.48 | 4,539.72 | 4,771.32 | 0.00 | 0.00 | 0.00 | |
| 11,417.81 | 90.00 | 87.68 | 6,109.00 | -1,467.76 | 4,557.52 | 4,788.03 | 0.00 | 0.00 | 0.00 | |
| TD at 11417.81 | | | | | | | | | | |

Planning Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Database: | EDT_32Bit_ODBC | Local Co-ordinate Reference: | Well STATE ANTELOPE C13-W43-2HN |
| 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 C13-W43-2HN | 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 |
| LP-STATE ANTELOPE () - plan hits target center - Point | 0.00 | 0.00 | 6,109.00 | -1,657.62 | -130.85 | 1,400,768.76 | 3,334,259.73 | 40.427300°N | 104.299310°W |
| PBHL-STATE ANTELOPE () - plan hits target center - Point | 0.00 | 0.00 | 6,109.00 | -1,467.76 | 4,557.52 | 1,401,022.10 | 3,338,944.92 | 40.427820°N | 104.282470°W |

| 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 | | | |
| 1,457.54 | 1,419.00 | Base of Upper Pierre aquifer | | | |
| 3,409.31 | 3,269.00 | Larimer ("Parkman") sandstone | | | |
| 3,799.66 | 3,639.00 | Pierre Formation | | | |
| 4,464.31 | 4,269.00 | Terry ("Sussex") sandstone | | | |
| 4,749.17 | 4,539.00 | Pierre Formation | | | |
| 4,870.49 | 4,654.00 | Hygiene ("Shannon") sandstone | | | |
| 5,044.57 | 4,819.00 | Pierre Formation | | | |
| 6,392.90 | 6,019.00 | Sharon Springs Member | | | |
| 6,725.60 | 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 |
| 1,029.17 | 1,012.97 | -135.08 | -63.76 | Start 4711.56 hold at 1029.17 MD |
| 5,740.73 | 5,478.87 | -1,492.93 | -704.67 | Start DLS 10.00 TFO -116.35 |
| 6,725.60 | 6,109.00 | -1,657.62 | -130.85 | Start 4692.21 hold at 6725.60 MD |
| 11,417.81 | 6,109.00 | -1,467.76 | 4,557.52 | TD at 11417.81 |