

BONANZA CREEK ENERGY OPERATING

Well Name: **Latham T-P-2HNB**

Surface Location: Latham 34-2 Pad Sec. 2-T4N-R63W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

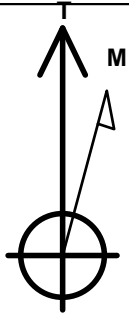
Ground Elevation: 4520.0

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|-------|-------|------------|------------|-----------|-------------|------|
| 0.0 | 0.0 | 1366883.38 | 3305614.47 | 40.335310 | -104.403700 | |

RKB - 13' WELL @ 4533.0ft (RKB - 13')

WELLBORE TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Shape Point |
|------------------------|--------|--------|-------|-------------|
| SHL 352'FSL & 2220'FEL | 1.0 | 0.0 | 0.0 | Point |
| BHL 470'FNL & 1290'FEL | 6268.0 | 4481.0 | 866.9 | Point |
| T1 531'FSL & 1362'FEL | 6268.0 | 207.7 | 853.1 | Point |



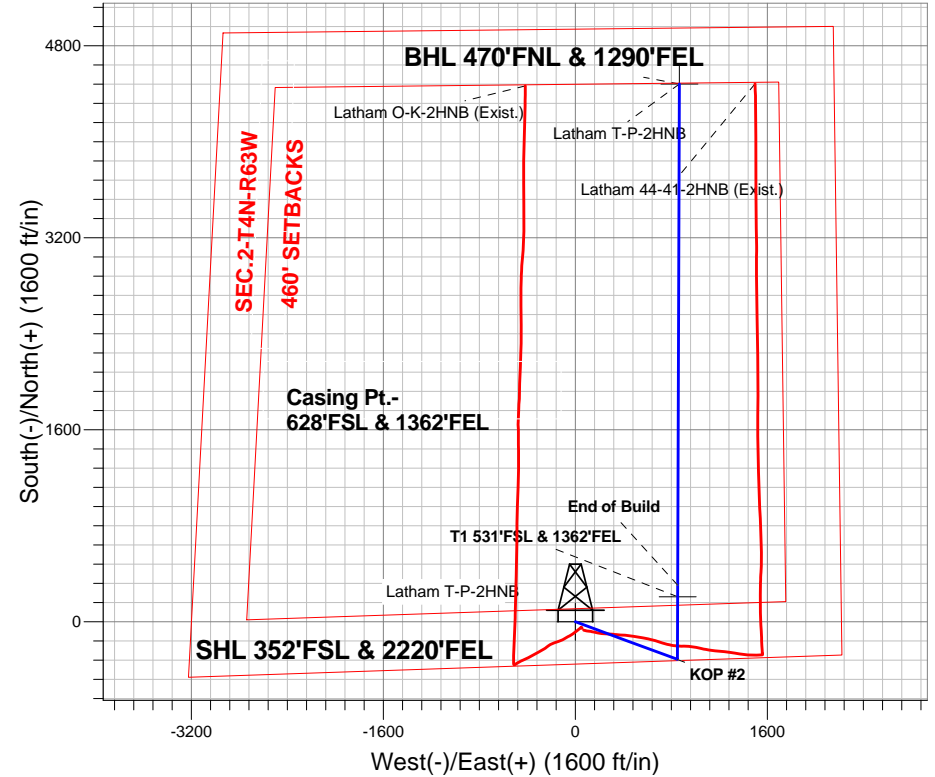
Azimuths to True North
Magnetic North: 8.34°

Magnetic Field
Strength: 52883.3nT
Dip Angle: 66.97°
Date: 11/13/2013
Model: IGRF2010

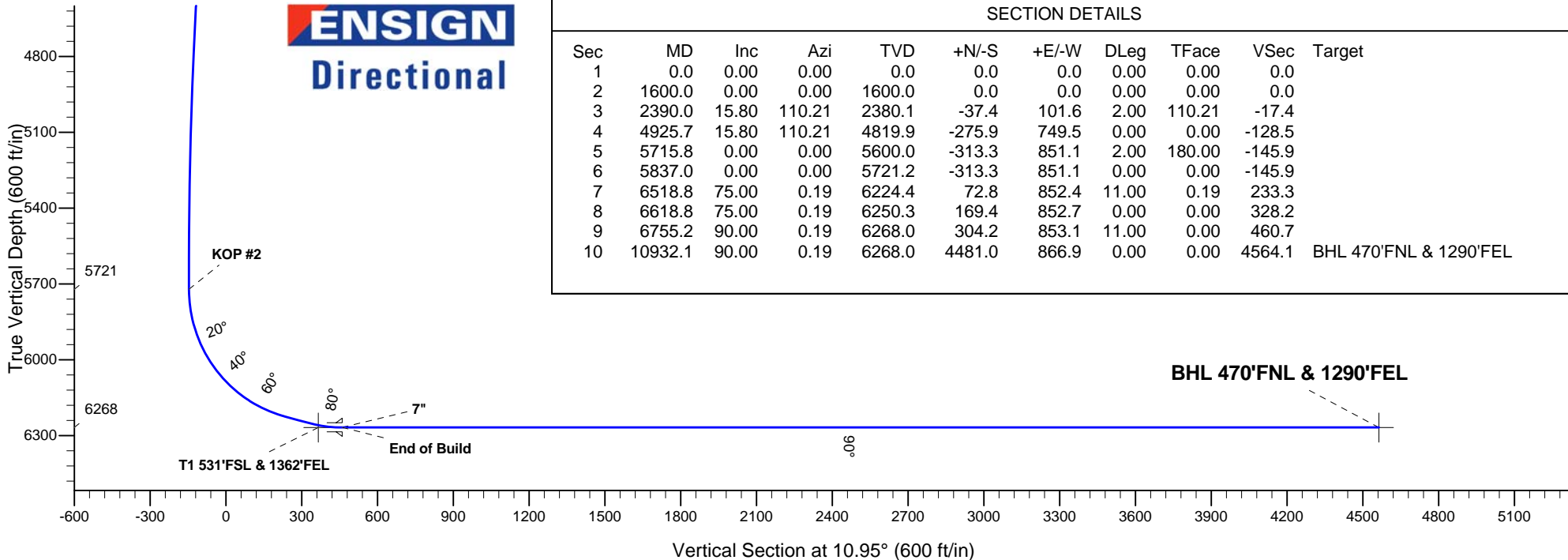
Latham 34-2 Pad Sec. 2-T4N-R63W
Latham T-P-2HNB
Plan #1 (11-12-13)
15:22, November 13 2013

ANNOTATIONS

| TVD | MD | Annotation |
|--------|--------|--------------|
| 1600.0 | 1600.0 | KOP #1 |
| 5721.2 | 5837.0 | KOP #2 |
| 6268.0 | 6755.2 | End of Build |



ENSIGN
Directional



SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSoc | Target |
|-----|---------|-------|--------|--------|--------|-------|-------|--------|--------|------------------------|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 1600.0 | 0.00 | 0.00 | 1600.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 2390.0 | 15.80 | 110.21 | 2380.1 | -37.4 | 101.6 | 2.00 | 110.21 | -17.4 | |
| 4 | 4925.7 | 15.80 | 110.21 | 4819.9 | -275.9 | 749.5 | 0.00 | 0.00 | -128.5 | |
| 5 | 5715.8 | 0.00 | 0.00 | 5600.0 | -313.3 | 851.1 | 2.00 | 180.00 | -145.9 | |
| 6 | 5837.0 | 0.00 | 0.00 | 5721.2 | -313.3 | 851.1 | 0.00 | 0.00 | -145.9 | |
| 7 | 6518.8 | 75.00 | 0.19 | 6224.4 | 72.8 | 852.4 | 11.00 | 0.19 | 233.3 | |
| 8 | 6618.8 | 75.00 | 0.19 | 6250.3 | 169.4 | 852.7 | 0.00 | 0.00 | 328.2 | |
| 9 | 6755.2 | 90.00 | 0.19 | 6268.0 | 304.2 | 853.1 | 11.00 | 0.00 | 460.7 | |
| 10 | 10932.1 | 90.00 | 0.19 | 6268.0 | 4481.0 | 866.9 | 0.00 | 0.00 | 4564.1 | BHL 470'FNL & 1290'FEL |



Directional

BONANZA CREEK ENERGY OPERATING

SEC.2-T4N-R63W

Latham 34-2 Pad Sec. 2-T4N-R63W

Latham T-P-2HNB

Wellbore #1

Plan: Plan #1 (11-12-13)

Standard Planning Report

13 November, 2013

| | | | |
|------------------|---------------------------------|-------------------------------------|-----------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Company: | BONANZA CREEK ENERGY OPERATING | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Project: | SEC.2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | North Reference: | True |
| Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (11-12-13) | | |

| | | | |
|--------------------|---------------------------------------|----------------------|-----------------------------|
| Project | SEC.2-T4N-R63W, Weld County, Colorado | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | Using Well Reference Point |
| Map Zone: | Colorado Northern Zone | | Using geodetic scale factor |

| Site | | | | | | Latham 34-2 Pad Sec. 2-T4N-R63W | | | | | | | | | | | |
|-----------------------|--|--|----------|--|--|---------------------------------|--|--|-----------------|--|--|-------------------|--|--|-------------|--|--|
| Site Position: | | | | | | Northing: | | | 1,366,829.47 ft | | | Latitude: | | | 40.335160 | | |
| From: | | | Lat/Long | | | Easting: | | | 3,305,673.68 ft | | | Longitude: | | | -104.403490 | | |
| Position Uncertainty: | | | 0.0 ft | | | Slot Radius: | | | " | | | Grid Convergence: | | | 0.71 ° | | |

| Well | Latham T-P-2HNB | | | | | |
|----------------------|-----------------|----------|---------------------|-----------------|---------------|-------------|
| Well Position | +N/-S | 54.6 ft | Northing: | 1,366,883.38 ft | Latitude: | 40.335310 |
| | +E/-W | -58.5 ft | Easting: | 3,305,614.47 ft | Longitude: | -104.403700 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 4,520.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 11/13/2013 | 8.34 | 66.97 | 52,883 |

| | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| Design | Plan #1 (11-12-13) | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
| | 0.0 | 0.0 | 0.0 | 10.95 |

| Plan Sections | | | | | | | | | | |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,600.0 | 0.00 | 0.00 | 1,600.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,390.0 | 15.80 | 110.21 | 2,380.1 | -37.4 | 101.6 | 2.00 | 2.00 | 0.00 | 110.21 | |
| 4,925.7 | 15.80 | 110.21 | 4,819.9 | -275.9 | 749.5 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,715.8 | 0.00 | 0.00 | 5,600.0 | -313.3 | 851.1 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 5,837.0 | 0.00 | 0.00 | 5,721.2 | -313.3 | 851.1 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,518.8 | 75.00 | 0.19 | 6,224.4 | 72.8 | 852.4 | 11.00 | 11.00 | 0.00 | 0.19 | |
| 6,618.8 | 75.00 | 0.19 | 6,250.3 | 169.4 | 852.7 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,755.2 | 90.00 | 0.19 | 6,268.0 | 304.2 | 853.1 | 11.00 | 11.00 | 0.00 | 0.00 | |
| 10,932.1 | 90.00 | 0.19 | 6,268.0 | 4,481.0 | 866.9 | 0.00 | 0.00 | 0.00 | 0.00 | BHL 470'FNL & 129 |

| | | | |
|------------------|---------------------------------|-------------------------------------|-----------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Company: | BONANZA CREEK ENERGY OPERATING | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Project: | SEC.2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | North Reference: | True |
| Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (11-12-13) | | |

| Planned Survey | | | | | | | | | |
|-----------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1.0 | 0.00 | 0.00 | 1.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| SHL 352'FSL & 2220'FEL | | | | | | | | | |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 700.0 | 0.00 | 0.00 | 700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 900.0 | 0.00 | 0.00 | 900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,000.0 | 0.00 | 0.00 | 1,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,100.0 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 0.00 | 0.00 | 1,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 0.00 | 0.00 | 1,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| KOP #1 | | | | | | | | | |
| 1,700.0 | 2.00 | 110.21 | 1,700.0 | -0.6 | 1.6 | -0.3 | 2.00 | 2.00 | 0.00 |
| 1,800.0 | 4.00 | 110.21 | 1,799.8 | -2.4 | 6.5 | -1.1 | 2.00 | 2.00 | 0.00 |
| 1,900.0 | 6.00 | 110.21 | 1,899.5 | -5.4 | 14.7 | -2.5 | 2.00 | 2.00 | 0.00 |
| 2,000.0 | 8.00 | 110.21 | 1,998.7 | -9.6 | 26.2 | -4.5 | 2.00 | 2.00 | 0.00 |
| 2,100.0 | 10.00 | 110.21 | 2,097.5 | -15.0 | 40.8 | -7.0 | 2.00 | 2.00 | 0.00 |
| 2,200.0 | 12.00 | 110.21 | 2,195.6 | -21.6 | 58.7 | -10.1 | 2.00 | 2.00 | 0.00 |
| 2,300.0 | 14.00 | 110.21 | 2,293.1 | -29.4 | 79.9 | -13.7 | 2.00 | 2.00 | 0.00 |
| 2,390.0 | 15.80 | 110.21 | 2,380.1 | -37.4 | 101.6 | -17.4 | 2.00 | 2.00 | 0.00 |
| 2,400.0 | 15.80 | 110.21 | 2,389.6 | -38.3 | 104.1 | -17.9 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 15.80 | 110.21 | 2,485.9 | -47.7 | 129.7 | -22.2 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 15.80 | 110.21 | 2,582.1 | -57.1 | 155.2 | -26.6 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 15.80 | 110.21 | 2,678.3 | -66.5 | 180.8 | -31.0 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 15.80 | 110.21 | 2,774.5 | -76.0 | 206.3 | -35.4 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 15.80 | 110.21 | 2,870.8 | -85.4 | 231.9 | -39.8 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 15.80 | 110.21 | 2,967.0 | -94.8 | 257.4 | -44.1 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 15.80 | 110.21 | 3,063.2 | -104.2 | 283.0 | -48.5 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 15.80 | 110.21 | 3,159.4 | -113.6 | 308.5 | -52.9 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 15.80 | 110.21 | 3,255.6 | -123.0 | 334.1 | -57.3 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 15.80 | 110.21 | 3,351.9 | -132.4 | 359.7 | -61.7 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 15.80 | 110.21 | 3,448.1 | -141.8 | 385.2 | -66.1 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 15.80 | 110.21 | 3,544.3 | -151.2 | 410.8 | -70.4 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 15.80 | 110.21 | 3,640.5 | -160.6 | 436.3 | -74.8 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 15.80 | 110.21 | 3,736.7 | -170.0 | 461.9 | -79.2 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 15.80 | 110.21 | 3,833.0 | -179.4 | 487.4 | -83.6 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 15.80 | 110.21 | 3,929.2 | -188.8 | 513.0 | -88.0 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 15.80 | 110.21 | 4,025.4 | -198.2 | 538.5 | -92.3 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 15.80 | 110.21 | 4,121.6 | -207.6 | 564.1 | -96.7 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 15.80 | 110.21 | 4,217.9 | -217.0 | 589.6 | -101.1 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 15.80 | 110.21 | 4,314.1 | -226.5 | 615.2 | -105.5 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 15.80 | 110.21 | 4,410.3 | -235.9 | 640.7 | -109.9 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 15.80 | 110.21 | 4,506.5 | -245.3 | 666.3 | -114.3 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 15.80 | 110.21 | 4,602.7 | -254.7 | 691.8 | -118.6 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 15.80 | 110.21 | 4,699.0 | -264.1 | 717.4 | -123.0 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 15.80 | 110.21 | 4,795.2 | -273.5 | 742.9 | -127.4 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|---------------------------------|-------------------------------------|-----------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Company: | BONANZA CREEK ENERGY OPERATING | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Project: | SEC.2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | North Reference: | True |
| Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (11-12-13) | | |

| Planned Survey | | | | | | | | | |
|----------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 4,925.7 | 15.80 | 110.21 | 4,819.9 | -275.9 | 749.5 | -128.5 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 14.32 | 110.21 | 4,891.7 | -282.6 | 767.6 | -131.6 | 2.00 | -2.00 | 0.00 |
| 5,100.0 | 12.32 | 110.21 | 4,989.0 | -290.5 | 789.2 | -135.3 | 2.00 | -2.00 | 0.00 |
| 5,200.0 | 10.32 | 110.21 | 5,087.0 | -297.3 | 807.6 | -138.5 | 2.00 | -2.00 | 0.00 |
| 5,300.0 | 8.32 | 110.21 | 5,185.7 | -302.9 | 822.8 | -141.1 | 2.00 | -2.00 | 0.00 |
| 5,400.0 | 6.32 | 110.21 | 5,284.9 | -307.3 | 834.8 | -143.1 | 2.00 | -2.00 | 0.00 |
| 5,500.0 | 4.32 | 110.21 | 5,384.4 | -310.5 | 843.5 | -144.6 | 2.00 | -2.00 | 0.00 |
| 5,600.0 | 2.32 | 110.21 | 5,484.3 | -312.5 | 848.9 | -145.6 | 2.00 | -2.00 | 0.00 |
| 5,700.0 | 0.32 | 110.21 | 5,584.2 | -313.3 | 851.1 | -145.9 | 2.00 | -2.00 | 0.00 |
| 5,715.8 | 0.00 | 0.00 | 5,600.0 | -313.3 | 851.1 | -145.9 | 2.00 | -2.00 | 0.00 |
| 5,800.0 | 0.00 | 0.00 | 5,684.2 | -313.3 | 851.1 | -145.9 | 0.00 | 0.00 | 0.00 |
| 5,837.0 | 0.00 | 0.00 | 5,721.2 | -313.3 | 851.1 | -145.9 | 0.00 | 0.00 | 0.00 |
| KOP #2 | | | | | | | | | |
| 5,900.0 | 6.93 | 0.19 | 5,784.1 | -309.5 | 851.1 | -142.2 | 11.00 | 11.00 | 0.00 |
| 6,000.0 | 17.93 | 0.19 | 5,881.6 | -288.0 | 851.2 | -121.1 | 11.00 | 11.00 | 0.00 |
| 6,100.0 | 28.93 | 0.19 | 5,973.2 | -248.3 | 851.3 | -82.1 | 11.00 | 11.00 | 0.00 |
| 6,200.0 | 39.93 | 0.19 | 6,055.6 | -191.9 | 851.5 | -26.6 | 11.00 | 11.00 | 0.00 |
| 6,300.0 | 50.93 | 0.19 | 6,125.6 | -120.7 | 851.7 | 43.2 | 11.00 | 11.00 | 0.00 |
| 6,400.0 | 61.93 | 0.19 | 6,180.8 | -37.5 | 852.0 | 125.0 | 11.00 | 11.00 | 0.00 |
| 6,500.0 | 72.93 | 0.19 | 6,219.2 | 54.7 | 852.3 | 215.6 | 11.00 | 11.00 | 0.00 |
| 6,518.8 | 75.00 | 0.19 | 6,224.4 | 72.8 | 852.4 | 233.3 | 11.00 | 11.00 | 0.00 |
| 6,600.0 | 75.00 | 0.19 | 6,245.4 | 151.2 | 852.6 | 310.4 | 0.00 | 0.00 | 0.00 |
| 6,618.8 | 75.00 | 0.19 | 6,250.3 | 169.4 | 852.7 | 328.2 | 0.00 | 0.00 | 0.00 |
| 6,659.8 | 79.51 | 0.19 | 6,259.3 | 209.3 | 852.8 | 367.5 | 11.00 | 11.00 | 0.00 |
| T1 531'FSL & 1362'FEL | | | | | | | | | |
| 6,700.0 | 83.93 | 0.19 | 6,265.1 | 249.1 | 853.0 | 406.5 | 11.00 | 11.00 | 0.00 |
| 6,755.2 | 90.00 | 0.19 | 6,268.0 | 304.2 | 853.1 | 460.7 | 11.00 | 11.00 | 0.00 |
| End of Build - 7" | | | | | | | | | |
| 6,800.0 | 90.00 | 0.19 | 6,268.0 | 349.0 | 853.3 | 504.7 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 90.00 | 0.19 | 6,268.0 | 449.0 | 853.6 | 602.9 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 90.00 | 0.19 | 6,268.0 | 549.0 | 853.9 | 701.2 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 90.00 | 0.19 | 6,268.0 | 649.0 | 854.3 | 799.4 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 90.00 | 0.19 | 6,268.0 | 749.0 | 854.6 | 897.7 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 90.00 | 0.19 | 6,268.0 | 849.0 | 854.9 | 995.9 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 90.00 | 0.19 | 6,268.0 | 949.0 | 855.3 | 1,094.1 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 90.00 | 0.19 | 6,268.0 | 1,049.0 | 855.6 | 1,192.4 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 90.00 | 0.19 | 6,268.0 | 1,149.0 | 855.9 | 1,290.6 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 90.00 | 0.19 | 6,268.0 | 1,249.0 | 856.2 | 1,388.9 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 90.00 | 0.19 | 6,268.0 | 1,349.0 | 856.6 | 1,487.1 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 90.00 | 0.19 | 6,268.0 | 1,449.0 | 856.9 | 1,585.3 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 90.00 | 0.19 | 6,268.0 | 1,549.0 | 857.2 | 1,683.6 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 90.00 | 0.19 | 6,268.0 | 1,649.0 | 857.6 | 1,781.8 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 90.00 | 0.19 | 6,268.0 | 1,749.0 | 857.9 | 1,880.1 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 90.00 | 0.19 | 6,268.0 | 1,849.0 | 858.2 | 1,978.3 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 90.00 | 0.19 | 6,268.0 | 1,949.0 | 858.5 | 2,076.6 | 0.00 | 0.00 | 0.00 |
| 8,500.0 | 90.00 | 0.19 | 6,268.0 | 2,049.0 | 858.9 | 2,174.8 | 0.00 | 0.00 | 0.00 |
| 8,600.0 | 90.00 | 0.19 | 6,268.0 | 2,149.0 | 859.2 | 2,273.0 | 0.00 | 0.00 | 0.00 |
| 8,700.0 | 90.00 | 0.19 | 6,268.0 | 2,249.0 | 859.5 | 2,371.3 | 0.00 | 0.00 | 0.00 |
| 8,800.0 | 90.00 | 0.19 | 6,268.0 | 2,349.0 | 859.9 | 2,469.5 | 0.00 | 0.00 | 0.00 |
| 8,900.0 | 90.00 | 0.19 | 6,268.0 | 2,449.0 | 860.2 | 2,567.8 | 0.00 | 0.00 | 0.00 |
| 9,000.0 | 90.00 | 0.19 | 6,268.0 | 2,549.0 | 860.5 | 2,666.0 | 0.00 | 0.00 | 0.00 |
| 9,100.0 | 90.00 | 0.19 | 6,268.0 | 2,649.0 | 860.8 | 2,764.2 | 0.00 | 0.00 | 0.00 |
| 9,200.0 | 90.00 | 0.19 | 6,268.0 | 2,749.0 | 861.2 | 2,862.5 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|---------------------------------|-------------------------------------|-----------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Company: | BONANZA CREEK ENERGY OPERATING | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Project: | SEC.2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | North Reference: | True |
| Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (11-12-13) | | |

| Planned Survey | | | | | | | | | | |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-----------------------------|----------------------------|---------------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | |
| 9,300.0 | 90.00 | 0.19 | 6,268.0 | 2,849.0 | 861.5 | 2,960.7 | 0.00 | 0.00 | 0.00 | |
| 9,400.0 | 90.00 | 0.19 | 6,268.0 | 2,949.0 | 861.8 | 3,059.0 | 0.00 | 0.00 | 0.00 | |
| 9,500.0 | 90.00 | 0.19 | 6,268.0 | 3,049.0 | 862.2 | 3,157.2 | 0.00 | 0.00 | 0.00 | |
| 9,600.0 | 90.00 | 0.19 | 6,268.0 | 3,149.0 | 862.5 | 3,255.5 | 0.00 | 0.00 | 0.00 | |
| 9,700.0 | 90.00 | 0.19 | 6,268.0 | 3,249.0 | 862.8 | 3,353.7 | 0.00 | 0.00 | 0.00 | |
| 9,800.0 | 90.00 | 0.19 | 6,268.0 | 3,349.0 | 863.1 | 3,451.9 | 0.00 | 0.00 | 0.00 | |
| 9,900.0 | 90.00 | 0.19 | 6,268.0 | 3,449.0 | 863.5 | 3,550.2 | 0.00 | 0.00 | 0.00 | |
| 10,000.0 | 90.00 | 0.19 | 6,268.0 | 3,549.0 | 863.8 | 3,648.4 | 0.00 | 0.00 | 0.00 | |
| 10,100.0 | 90.00 | 0.19 | 6,268.0 | 3,649.0 | 864.1 | 3,746.7 | 0.00 | 0.00 | 0.00 | |
| 10,200.0 | 90.00 | 0.19 | 6,268.0 | 3,749.0 | 864.5 | 3,844.9 | 0.00 | 0.00 | 0.00 | |
| 10,300.0 | 90.00 | 0.19 | 6,268.0 | 3,849.0 | 864.8 | 3,943.1 | 0.00 | 0.00 | 0.00 | |
| 10,400.0 | 90.00 | 0.19 | 6,268.0 | 3,949.0 | 865.1 | 4,041.4 | 0.00 | 0.00 | 0.00 | |
| 10,500.0 | 90.00 | 0.19 | 6,268.0 | 4,048.9 | 865.5 | 4,139.6 | 0.00 | 0.00 | 0.00 | |
| 10,600.0 | 90.00 | 0.19 | 6,268.0 | 4,148.9 | 865.8 | 4,237.9 | 0.00 | 0.00 | 0.00 | |
| 10,700.0 | 90.00 | 0.19 | 6,268.0 | 4,248.9 | 866.1 | 4,336.1 | 0.00 | 0.00 | 0.00 | |
| 10,800.0 | 90.00 | 0.19 | 6,268.0 | 4,348.9 | 866.4 | 4,434.4 | 0.00 | 0.00 | 0.00 | |
| 10,900.0 | 90.00 | 0.19 | 6,268.0 | 4,448.9 | 866.8 | 4,532.6 | 0.00 | 0.00 | 0.00 | |
| 10,932.1 | 90.00 | 0.19 | 6,268.0 | 4,481.0 | 866.9 | 4,564.1 | 0.00 | 0.00 | 0.00 | |
| BHL 470'FNL & 1290'FEL | | | | | | | | | | |

| Targets | | | | | | | | | | |
|---|---------------|--------------|----------|------------|------------|---------------|--------------|-----------|--|-------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | | Longitude |
| SHL 352'FSL & 2220'I - hit/miss target - Shape - Point | 0.00 | 0.00 | 1.0 | 0.0 | 0.0 | 1,366,883.39 | 3,305,614.47 | 40.335310 | | -104.403700 |
| BHL 470'FNL & 1290' - plan hits target center - Point | 0.00 | 0.00 | 6,268.0 | 4,481.0 | 866.9 | 1,371,374.58 | 3,306,425.85 | 40.347610 | | -104.400590 |
| T1 531'FSL & 1362'FE - plan misses target center by 8.9ft at 6659.8ft MD (6259.3 TVD, 209.3 N, 852.8 E) - Point | 0.00 | 0.00 | 6,268.0 | 207.7 | 853.1 | 1,367,101.58 | 3,306,464.89 | 40.335880 | | -104.400640 |

| Casing Points | | | | | | |
|---------------------|---------------------|------|--|--|---------------------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | | | Casing Diameter (") | Hole Diameter (") |
| 6,755.2 | 6,268.0 | 7" | | | 7 | 7-1/2 |

| Plan Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|--------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment | |
| 1,600.0 | 1,600.0 | +N/-S (ft) | +E/-W (ft) | KOP #1 | |
| 5,837.0 | 5,721.2 | -313.3 | 851.1 | KOP #2 | |
| 6,755.2 | 6,268.0 | 304.2 | 853.1 | End of Build | |



Directional

BONANZA CREEK ENERGY OPERATING

SEC.2-T4N-R63W

Latham 34-2 Pad Sec. 2-T4N-R63W

Latham T-P-2HNB

Wellbore #1

Plan #1 (11-12-13)

Anticollision Report

13 November, 2013

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | Plan #1 (11-12-13) | | |
| Filter type: | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| Interpolation Method: | Stations | Error Model: | ISCWSA |
| Depth Range: | Unlimited | Scan Method: | Closest Approach 3D |
| Results Limited by: | Maximum center-center distance of 1,000.0ft | Error Surface: | Elliptical Conic |
| Warning Levels Evaluated at: | 2.00 Sigma | | |

| | | | | |
|----------------------------|------------------------|----------------------------------|------------------|--------------------|
| Survey Tool Program | Date 11/13/2013 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 10,932.1 | Plan #1 (11-12-13) (Wellbore #1) | MWD | MWD - Standard |

| Summary | | | | | | |
|--|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|------------|
| Site Name | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| Latham 34-2 Pad Sec. 2-T4N-R63W | | | | | | |
| Latham 34-31-2HNB - Wellbore #1 - Plan #1 (11-12-13) | 1,600.0 | 1,600.0 | 22.2 | 15.2 | 3.184 | CC, ES, SF |
| Latham 44-41-2HNB (Exist.) - Wellbore #1 - Wellbore #1 | 128.7 | 128.7 | 97.5 | 97.1 | 263.314 | CC, ES |
| Latham 44-41-2HNB (Exist.) - Wellbore #1 - Wellbore #1 | 10,932.1 | 10,983.0 | 631.5 | 458.5 | 3.650 | SF |
| Latham O34-K31-2HC - Wellbore #1 - Plan #1 (11-12-13) | 483.1 | 483.5 | 54.7 | 52.7 | 28.294 | CC |
| Latham O34-K31-2HC - Wellbore #1 - Plan #1 (11-12-13) | 500.0 | 500.0 | 54.7 | 52.7 | 27.291 | ES |
| Latham O34-K31-2HC - Wellbore #1 - Plan #1 (11-12-13) | 10,932.1 | 11,042.3 | 983.7 | 808.2 | 5.607 | SF |
| Latham O-K-2HNB (Exist.) - Wellbore #1 - Wellbore #1 | 1,087.3 | 1,087.7 | 66.9 | 62.5 | 14.926 | CC |
| Latham O-K-2HNB (Exist.) - Wellbore #1 - Wellbore #1 | 1,100.0 | 1,100.3 | 67.0 | 62.4 | 14.745 | ES |
| Latham O-K-2HNB (Exist.) - Wellbore #1 - Wellbore #1 | 1,300.0 | 1,298.4 | 71.2 | 65.8 | 13.111 | SF |
| Latham T34-P31-2HC - Wellbore #1 - Plan #1 (11-12-13) | 1,200.0 | 1,200.0 | 40.3 | 35.2 | 7.802 | CC, ES |
| Latham T34-P31-2HC - Wellbore #1 - Plan #1 (11-12-13) | 10,932.1 | 11,048.0 | 369.6 | 208.5 | 2.295 | SF |
| Latham T44-P41-2HC - Wellbore #1 - Plan #1 (11-12-13) | 1,400.0 | 1,400.0 | 20.2 | 14.1 | 3.323 | CC, ES |
| Latham T44-P41-2HC - Wellbore #1 - Plan #1 (11-12-13) | 10,932.1 | 11,175.3 | 367.1 | 211.1 | 2.353 | SF |

| Offset Design Latham 34-2 Pad Sec. 2-T4N-R63W - Latham 34-31-2HNB - Wellbore #1 - Plan #1 (11-12-13) | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|-----------------------------------|-------------------------------|--------------------------------|-------------------------|-------------------|---------------------------|--------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -48.94 | 14.6 | -16.7 | 22.2 | | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | -48.94 | 14.6 | -16.7 | 22.2 | 22.0 | 0.22 | 98.701 | | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | -48.94 | 14.6 | -16.7 | 22.2 | 21.5 | 0.67 | 32.900 | | |
| 300.0 | 300.0 | 300.0 | 300.0 | 0.6 | 0.6 | -48.94 | 14.6 | -16.7 | 22.2 | 21.1 | 1.12 | 19.740 | | |
| 400.0 | 400.0 | 400.0 | 400.0 | 0.8 | 0.8 | -48.94 | 14.6 | -16.7 | 22.2 | 20.6 | 1.57 | 14.100 | | |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | -48.94 | 14.6 | -16.7 | 22.2 | 20.2 | 2.02 | 10.967 | | |
| 600.0 | 600.0 | 600.0 | 600.0 | 1.2 | 1.2 | -48.94 | 14.6 | -16.7 | 22.2 | 19.7 | 2.47 | 8.973 | | |
| 700.0 | 700.0 | 700.0 | 700.0 | 1.5 | 1.5 | -48.94 | 14.6 | -16.7 | 22.2 | 19.3 | 2.92 | 7.592 | | |
| 800.0 | 800.0 | 800.0 | 800.0 | 1.7 | 1.7 | -48.94 | 14.6 | -16.7 | 22.2 | 18.8 | 3.37 | 6.580 | | |
| 900.0 | 900.0 | 900.0 | 900.0 | 1.9 | 1.9 | -48.94 | 14.6 | -16.7 | 22.2 | 18.4 | 3.82 | 5.806 | | |
| 1,000.0 | 1,000.0 | 1,000.0 | 1,000.0 | 2.1 | 2.1 | -48.94 | 14.6 | -16.7 | 22.2 | 17.9 | 4.27 | 5.195 | | |
| 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 | 2.4 | 2.4 | -48.94 | 14.6 | -16.7 | 22.2 | 17.5 | 4.72 | 4.700 | | |
| 1,200.0 | 1,200.0 | 1,200.0 | 1,200.0 | 2.6 | 2.6 | -48.94 | 14.6 | -16.7 | 22.2 | 17.0 | 5.17 | 4.291 | | |
| 1,300.0 | 1,300.0 | 1,300.0 | 1,300.0 | 2.8 | 2.8 | -48.94 | 14.6 | -16.7 | 22.2 | 16.6 | 5.62 | 3.948 | | |
| 1,400.0 | 1,400.0 | 1,400.0 | 1,400.0 | 3.0 | 3.0 | -48.94 | 14.6 | -16.7 | 22.2 | 16.1 | 6.07 | 3.656 | | |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.0ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|------------|
| Survey Program: 0-MWD | | | | | | | | | | | | Offset Well Error: | 0.0ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning |
| 1,500.0 | 1,500.0 | 1,500.0 | 1,500.0 | 3.3 | 3.3 | -48.94 | 14.6 | -16.7 | 22.2 | 15.7 | 6.52 | 3.403 | |
| 1,600.0 | 1,600.0 | 1,600.0 | 1,600.0 | 3.5 | 3.5 | -48.94 | 14.6 | -16.7 | 22.2 | 15.2 | 6.97 | 3.184 | CC, ES, SF |
| 1,700.0 | 1,700.0 | 1,700.0 | 1,700.0 | 3.7 | 3.7 | -160.63 | 14.6 | -16.7 | 23.8 | 16.4 | 7.40 | 3.221 | |
| 1,800.0 | 1,799.8 | 1,799.8 | 1,799.8 | 3.9 | 3.9 | -164.06 | 14.6 | -16.7 | 28.8 | 21.0 | 7.80 | 3.694 | |
| 1,900.0 | 1,899.5 | 1,899.5 | 1,899.5 | 4.1 | 4.2 | -167.70 | 14.6 | -16.7 | 37.3 | 29.1 | 8.20 | 4.545 | |
| 2,000.0 | 1,998.7 | 1,998.7 | 1,998.7 | 4.3 | 4.4 | -170.68 | 14.6 | -16.7 | 49.2 | 40.7 | 8.59 | 5.731 | |
| 2,100.0 | 2,097.5 | 2,099.3 | 2,099.2 | 4.6 | 4.6 | -173.83 | 13.0 | -15.9 | 63.4 | 54.4 | 8.95 | 7.078 | |
| 2,200.0 | 2,195.6 | 2,200.0 | 2,199.8 | 4.8 | 4.8 | -177.63 | 8.4 | -13.5 | 78.3 | 69.1 | 9.28 | 8.443 | |
| 2,300.0 | 2,293.1 | 2,300.8 | 2,300.2 | 5.2 | 4.9 | 178.33 | 0.6 | -9.4 | 94.5 | 84.8 | 9.61 | 9.829 | |
| 2,390.0 | 2,380.1 | 2,391.5 | 2,390.2 | 5.5 | 5.1 | 174.67 | -9.1 | -4.4 | 110.1 | 100.2 | 9.92 | 11.102 | |
| 2,400.0 | 2,389.6 | 2,401.5 | 2,400.2 | 5.5 | 5.1 | 174.28 | -10.3 | -3.7 | 111.9 | 102.0 | 9.96 | 11.235 | |
| 2,500.0 | 2,485.9 | 2,500.6 | 2,498.2 | 6.0 | 5.4 | 170.52 | -23.5 | 3.1 | 129.4 | 119.0 | 10.41 | 12.431 | |
| 2,600.0 | 2,582.1 | 2,598.8 | 2,595.2 | 6.4 | 5.6 | 167.63 | -36.8 | 10.1 | 147.2 | 136.3 | 10.89 | 13.512 | |
| 2,700.0 | 2,678.3 | 2,697.0 | 2,692.2 | 6.9 | 5.8 | 165.36 | -50.0 | 17.0 | 165.2 | 153.8 | 11.40 | 14.490 | |
| 2,800.0 | 2,774.5 | 2,795.1 | 2,789.3 | 7.4 | 6.1 | 163.54 | -63.3 | 23.9 | 183.5 | 171.6 | 11.94 | 15.367 | |
| 2,900.0 | 2,870.8 | 2,893.3 | 2,886.3 | 7.9 | 6.3 | 162.05 | -76.5 | 30.8 | 201.9 | 189.4 | 12.50 | 16.152 | |
| 3,000.0 | 2,967.0 | 2,991.5 | 2,983.3 | 8.4 | 6.6 | 160.80 | -89.8 | 37.7 | 220.4 | 207.3 | 13.08 | 16.852 | |
| 3,100.0 | 3,063.2 | 3,089.6 | 3,080.3 | 8.9 | 6.9 | 159.75 | -103.0 | 44.6 | 239.0 | 225.3 | 13.68 | 17.476 | |
| 3,200.0 | 3,159.4 | 3,187.8 | 3,177.4 | 9.4 | 7.2 | 158.86 | -116.3 | 51.5 | 257.7 | 243.4 | 14.29 | 18.033 | |
| 3,300.0 | 3,255.6 | 3,286.0 | 3,274.4 | 10.0 | 7.5 | 158.08 | -129.5 | 58.4 | 276.4 | 261.5 | 14.91 | 18.531 | |
| 3,400.0 | 3,351.9 | 3,384.2 | 3,371.4 | 10.5 | 7.8 | 157.40 | -142.8 | 65.4 | 295.1 | 279.6 | 15.55 | 18.977 | |
| 3,500.0 | 3,448.1 | 3,482.3 | 3,468.4 | 11.0 | 8.1 | 156.80 | -156.0 | 72.3 | 313.9 | 297.7 | 16.20 | 19.378 | |
| 3,600.0 | 3,544.3 | 3,580.5 | 3,565.5 | 11.6 | 8.4 | 156.27 | -169.3 | 79.2 | 332.7 | 315.9 | 16.86 | 19.738 | |
| 3,700.0 | 3,640.5 | 3,678.7 | 3,662.5 | 12.1 | 8.7 | 155.80 | -182.5 | 86.1 | 351.6 | 334.1 | 17.52 | 20.063 | |
| 3,800.0 | 3,736.7 | 3,776.8 | 3,759.5 | 12.7 | 9.1 | 155.37 | -195.8 | 93.0 | 370.4 | 352.3 | 18.20 | 20.357 | |
| 3,900.0 | 3,833.0 | 3,875.0 | 3,856.5 | 13.3 | 9.4 | 154.99 | -209.0 | 99.9 | 389.3 | 370.5 | 18.88 | 20.623 | |
| 4,000.0 | 3,929.2 | 3,973.2 | 3,953.6 | 13.8 | 9.7 | 154.64 | -222.3 | 106.8 | 408.2 | 388.7 | 19.56 | 20.866 | |
| 4,100.0 | 4,025.4 | 4,071.3 | 4,050.6 | 14.4 | 10.0 | 154.32 | -235.5 | 113.8 | 427.1 | 406.9 | 20.26 | 21.087 | |
| 4,200.0 | 4,121.6 | 4,169.5 | 4,147.6 | 14.9 | 10.4 | 154.03 | -248.8 | 120.7 | 446.1 | 425.1 | 20.95 | 21.289 | |
| 4,300.0 | 4,217.9 | 4,267.7 | 4,244.6 | 15.5 | 10.7 | 153.77 | -262.0 | 127.6 | 465.0 | 443.3 | 21.65 | 21.474 | |
| 4,400.0 | 4,314.1 | 4,365.8 | 4,341.7 | 16.1 | 11.0 | 153.52 | -275.3 | 134.5 | 483.9 | 461.6 | 22.36 | 21.644 | |
| 4,500.0 | 4,410.3 | 4,464.0 | 4,438.7 | 16.7 | 11.4 | 153.29 | -288.5 | 141.4 | 502.9 | 479.8 | 23.07 | 21.801 | |
| 4,600.0 | 4,506.5 | 4,562.2 | 4,535.7 | 17.2 | 11.7 | 153.08 | -301.8 | 148.3 | 521.9 | 498.1 | 23.78 | 21.945 | |
| 4,700.0 | 4,602.7 | 4,655.9 | 4,628.4 | 17.8 | 12.0 | 152.97 | -313.8 | 154.6 | 541.1 | 516.7 | 24.43 | 22.154 | |
| 4,800.0 | 4,699.0 | 4,747.3 | 4,719.2 | 18.4 | 12.2 | 153.14 | -323.0 | 159.4 | 561.5 | 536.5 | 24.99 | 22.466 | |
| 4,900.0 | 4,795.2 | 4,838.1 | 4,809.7 | 18.9 | 12.4 | 153.57 | -329.6 | 162.8 | 583.0 | 557.5 | 25.50 | 22.861 | |
| 4,925.7 | 4,819.9 | 4,861.3 | 4,832.9 | 19.1 | 12.5 | 153.72 | -330.9 | 163.5 | 588.7 | 563.1 | 25.62 | 22.976 | |
| 5,000.0 | 4,891.7 | 4,928.3 | 4,899.8 | 19.5 | 12.6 | 154.33 | -333.7 | 165.0 | 604.9 | 578.9 | 25.97 | 23.293 | |
| 5,100.0 | 4,989.0 | 5,018.4 | 4,989.9 | 19.8 | 12.8 | 155.19 | -335.2 | 165.8 | 625.1 | 598.7 | 26.35 | 23.724 | |
| 5,200.0 | 5,087.0 | 5,115.5 | 5,087.0 | 20.2 | 13.0 | 156.07 | -335.2 | 165.8 | 643.0 | 616.3 | 26.69 | 24.091 | |
| 5,300.0 | 5,185.7 | 5,214.2 | 5,185.7 | 20.5 | 13.1 | 156.75 | -335.2 | 165.8 | 657.9 | 630.8 | 27.02 | 24.344 | |
| 5,400.0 | 5,284.9 | 5,313.4 | 5,284.9 | 20.8 | 13.3 | 157.28 | -335.2 | 165.8 | 669.6 | 642.3 | 27.35 | 24.486 | |
| 5,500.0 | 5,384.4 | 5,412.9 | 5,384.4 | 21.0 | 13.5 | 157.64 | -335.2 | 165.8 | 678.2 | 650.5 | 27.65 | 24.522 | |
| 5,600.0 | 5,484.3 | 5,512.8 | 5,484.3 | 21.1 | 13.6 | 157.87 | -335.2 | 165.8 | 683.5 | 655.6 | 27.95 | 24.577 | |
| 5,700.0 | 5,584.2 | 5,612.7 | 5,584.2 | 21.3 | 13.8 | 157.96 | -335.2 | 165.8 | 685.6 | 657.4 | 28.22 | 24.294 | |
| 5,715.8 | 5,600.0 | 5,628.5 | 5,600.0 | 21.3 | 13.8 | -91.83 | -335.2 | 165.8 | 685.7 | 657.4 | 28.29 | 24.236 | |
| 5,800.0 | 5,684.2 | 5,712.7 | 5,684.2 | 21.4 | 14.0 | -91.83 | -335.2 | 165.8 | 685.7 | 657.1 | 28.58 | 23.991 | |
| 5,837.0 | 5,721.2 | 5,749.7 | 5,721.2 | 21.4 | 14.1 | -91.83 | -335.2 | 165.8 | 685.7 | 657.0 | 28.71 | 23.883 | |
| 5,850.0 | 5,734.2 | 5,763.5 | 5,735.0 | 21.4 | 14.1 | -92.02 | -335.0 | 165.8 | 685.7 | 657.0 | 28.73 | 23.870 | |
| 5,900.0 | 5,784.1 | 5,816.5 | 5,787.9 | 21.5 | 14.2 | -92.01 | -331.0 | 165.8 | 685.6 | 656.8 | 28.86 | 23.761 | |
| 5,950.0 | 5,833.4 | 5,869.5 | 5,840.0 | 21.5 | 14.2 | -91.97 | -321.5 | 165.9 | 685.5 | 656.6 | 28.91 | 23.710 | |
| 6,000.0 | 5,881.6 | 5,922.4 | 5,890.8 | 21.5 | 14.2 | -91.92 | -306.9 | 166.1 | 685.4 | 656.5 | 28.91 | 23.709 | |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design Latham 34-2 Pad Sec. 2-T4N-R63W - Latham 34-31-2HNB - Wellbore #1 - Plan #1 (11-12-13) | | | | | | | | | | | | | Offset Site Error: | 0.0ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWDD | | | | | | | | | | | | | Offset Well Error: | 0.0ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | | |
| 6,050.0 | 5,928.4 | 5,975.2 | 5,939.7 | 21.5 | 14.2 | -91.84 | -287.2 | 166.3 | 685.2 | 656.4 | 28.85 | 23.750 | | |
| 6,100.0 | 5,973.2 | 6,027.8 | 5,986.3 | 21.5 | 14.1 | -91.75 | -262.7 | 166.6 | 685.0 | 656.2 | 28.76 | 23.819 | | |
| 6,150.0 | 6,015.7 | 6,080.3 | 6,030.1 | 21.5 | 14.1 | -91.64 | -233.8 | 166.9 | 684.7 | 656.1 | 28.65 | 23.903 | | |
| 6,200.0 | 6,055.6 | 6,132.6 | 6,070.6 | 21.4 | 14.0 | -91.52 | -200.7 | 167.3 | 684.4 | 655.9 | 28.54 | 23.985 | | |
| 6,250.0 | 6,092.3 | 6,184.7 | 6,107.4 | 21.4 | 14.0 | -91.38 | -163.9 | 167.7 | 684.1 | 655.6 | 28.45 | 24.047 | | |
| 6,300.0 | 6,125.6 | 6,236.6 | 6,140.3 | 21.3 | 13.9 | -91.23 | -123.8 | 168.2 | 683.7 | 655.3 | 28.40 | 24.071 | | |
| 6,350.0 | 6,155.2 | 6,288.2 | 6,168.8 | 21.3 | 13.9 | -91.07 | -80.8 | 168.7 | 683.3 | 654.9 | 28.43 | 24.040 | | |
| 6,400.0 | 6,180.8 | 6,339.6 | 6,192.9 | 21.3 | 13.9 | -90.90 | -35.4 | 169.2 | 683.0 | 654.4 | 28.53 | 23.940 | | |
| 6,450.0 | 6,202.2 | 6,390.7 | 6,212.3 | 21.2 | 13.9 | -90.72 | 11.8 | 169.7 | 682.5 | 653.8 | 28.72 | 23.762 | | |
| 6,500.0 | 6,219.2 | 6,441.4 | 6,226.9 | 21.2 | 14.0 | -90.54 | 60.3 | 170.2 | 682.1 | 653.1 | 29.03 | 23.501 | | |
| 6,518.8 | 6,224.4 | 6,460.2 | 6,231.8 | 21.2 | 14.0 | -90.53 | 78.5 | 170.5 | 682.0 | 652.8 | 29.17 | 23.376 | | |
| 6,600.0 | 6,245.4 | 6,541.5 | 6,252.7 | 21.2 | 14.4 | -90.52 | 157.1 | 171.3 | 681.3 | 651.4 | 29.96 | 22.743 | | |
| 6,618.8 | 6,250.3 | 6,560.6 | 6,257.0 | 21.2 | 14.6 | -90.46 | 175.7 | 171.6 | 681.2 | 651.0 | 30.18 | 22.568 | | |
| 6,650.0 | 6,257.4 | 6,592.1 | 6,262.5 | 21.2 | 14.8 | -90.34 | 206.6 | 171.9 | 680.9 | 650.4 | 30.58 | 22.266 | | |
| 6,700.0 | 6,265.1 | 6,642.4 | 6,267.4 | 21.3 | 15.2 | -90.14 | 256.7 | 172.5 | 680.5 | 649.2 | 31.29 | 21.746 | | |
| 6,750.0 | 6,268.0 | 6,692.4 | 6,268.0 | 21.4 | 15.6 | -90.00 | 306.7 | 173.0 | 680.1 | 648.0 | 32.09 | 21.192 | | |
| 6,755.2 | 6,268.0 | 6,697.6 | 6,268.0 | 21.4 | 15.7 | -90.00 | 311.9 | 173.1 | 680.1 | 647.9 | 32.18 | 21.133 | | |
| 6,800.0 | 6,268.0 | 6,742.4 | 6,268.0 | 21.6 | 16.1 | -90.00 | 356.7 | 173.6 | 679.7 | 646.7 | 33.01 | 20.594 | | |
| 6,900.0 | 6,268.0 | 6,842.4 | 6,268.0 | 22.0 | 17.2 | -90.00 | 456.7 | 174.7 | 678.9 | 643.9 | 35.04 | 19.377 | | |
| 7,000.0 | 6,268.0 | 6,942.4 | 6,268.0 | 22.7 | 18.4 | -90.00 | 556.6 | 175.9 | 678.1 | 640.8 | 37.35 | 18.154 | | |
| 7,100.0 | 6,268.0 | 7,042.4 | 6,268.0 | 23.6 | 19.7 | -90.00 | 656.6 | 177.0 | 677.3 | 637.4 | 39.90 | 16.973 | | |
| 7,200.0 | 6,268.0 | 7,142.4 | 6,268.0 | 24.7 | 21.1 | -90.00 | 756.6 | 178.1 | 676.5 | 633.9 | 42.65 | 15.862 | | |
| 7,300.0 | 6,268.0 | 7,242.4 | 6,268.0 | 25.8 | 22.6 | -90.00 | 856.6 | 179.3 | 675.7 | 630.2 | 45.55 | 14.834 | | |
| 7,400.0 | 6,268.0 | 7,342.4 | 6,268.0 | 27.1 | 24.1 | -90.00 | 956.6 | 180.4 | 674.9 | 626.3 | 48.58 | 13.892 | | |
| 7,500.0 | 6,268.0 | 7,442.4 | 6,268.0 | 28.5 | 25.7 | -90.00 | 1,056.6 | 181.5 | 674.1 | 622.4 | 51.72 | 13.033 | | |
| 7,600.0 | 6,268.0 | 7,542.4 | 6,268.0 | 30.0 | 27.3 | -90.00 | 1,156.6 | 182.7 | 673.3 | 618.3 | 54.95 | 12.253 | | |
| 7,700.0 | 6,268.0 | 7,642.4 | 6,268.0 | 31.5 | 29.0 | -90.00 | 1,256.6 | 183.8 | 672.5 | 614.2 | 58.25 | 11.545 | | |
| 7,800.0 | 6,268.0 | 7,742.4 | 6,268.0 | 33.1 | 30.7 | -90.00 | 1,356.6 | 184.9 | 671.7 | 610.1 | 61.61 | 10.902 | | |
| 7,900.0 | 6,268.0 | 7,842.4 | 6,268.0 | 34.7 | 32.4 | -90.00 | 1,456.6 | 186.1 | 670.9 | 605.9 | 65.03 | 10.317 | | |
| 8,000.0 | 6,268.0 | 7,942.4 | 6,268.0 | 36.3 | 34.2 | -90.00 | 1,556.5 | 187.2 | 670.1 | 601.6 | 68.49 | 9.784 | | |
| 8,100.0 | 6,268.0 | 8,042.4 | 6,268.0 | 37.9 | 35.9 | -90.00 | 1,656.5 | 188.3 | 669.3 | 597.3 | 71.99 | 9.297 | | |
| 8,200.0 | 6,268.0 | 8,142.4 | 6,268.0 | 39.6 | 37.7 | -90.00 | 1,756.5 | 189.4 | 668.5 | 593.0 | 75.52 | 8.852 | | |
| 8,300.0 | 6,268.0 | 8,242.4 | 6,268.0 | 41.3 | 39.5 | -90.00 | 1,856.5 | 190.6 | 667.7 | 588.6 | 79.08 | 8.444 | | |
| 8,400.0 | 6,268.0 | 8,342.3 | 6,268.0 | 43.0 | 41.3 | -90.00 | 1,956.5 | 191.7 | 666.9 | 584.2 | 82.66 | 8.068 | | |
| 8,500.0 | 6,268.0 | 8,442.3 | 6,268.0 | 44.8 | 43.1 | -90.00 | 2,056.5 | 192.8 | 666.1 | 579.8 | 86.27 | 7.721 | | |
| 8,600.0 | 6,268.0 | 8,542.3 | 6,268.0 | 46.5 | 44.9 | -90.00 | 2,156.5 | 194.0 | 665.3 | 575.4 | 89.89 | 7.401 | | |
| 8,700.0 | 6,268.0 | 8,642.3 | 6,268.0 | 48.3 | 46.7 | -90.00 | 2,256.5 | 195.1 | 664.5 | 570.9 | 93.53 | 7.104 | | |
| 8,800.0 | 6,268.0 | 8,742.3 | 6,268.0 | 50.1 | 48.6 | -90.00 | 2,356.5 | 196.2 | 663.7 | 566.5 | 97.19 | 6.829 | | |
| 8,900.0 | 6,268.0 | 8,842.3 | 6,268.0 | 51.9 | 50.4 | -90.00 | 2,456.5 | 197.4 | 662.9 | 562.0 | 100.86 | 6.572 | | |
| 9,000.0 | 6,268.0 | 8,942.3 | 6,268.0 | 53.7 | 52.3 | -90.00 | 2,556.5 | 198.5 | 662.1 | 557.5 | 104.54 | 6.333 | | |
| 9,100.0 | 6,268.0 | 9,042.3 | 6,268.0 | 55.5 | 54.1 | -90.00 | 2,656.4 | 199.6 | 661.3 | 553.0 | 108.23 | 6.110 | | |
| 9,200.0 | 6,268.0 | 9,142.3 | 6,268.0 | 57.3 | 56.0 | -90.00 | 2,756.4 | 200.8 | 660.5 | 548.5 | 111.93 | 5.900 | | |
| 9,300.0 | 6,268.0 | 9,242.3 | 6,268.0 | 59.1 | 57.8 | -90.00 | 2,856.4 | 201.9 | 659.7 | 544.0 | 115.65 | 5.704 | | |
| 9,400.0 | 6,268.0 | 9,342.3 | 6,268.0 | 60.9 | 59.7 | -90.00 | 2,956.4 | 203.0 | 658.8 | 539.5 | 119.36 | 5.520 | | |
| 9,500.0 | 6,268.0 | 9,442.3 | 6,268.0 | 62.7 | 61.5 | -90.00 | 3,056.4 | 204.2 | 658.0 | 535.0 | 123.09 | 5.346 | | |
| 9,600.0 | 6,268.0 | 9,542.3 | 6,268.0 | 64.6 | 63.4 | -90.00 | 3,156.4 | 205.3 | 657.2 | 530.4 | 126.82 | 5.182 | | |
| 9,700.0 | 6,268.0 | 9,642.3 | 6,268.0 | 66.4 | 65.3 | -90.00 | 3,256.4 | 206.4 | 656.4 | 525.9 | 130.56 | 5.028 | | |
| 9,800.0 | 6,268.0 | 9,742.3 | 6,268.0 | 68.3 | 67.2 | -90.00 | 3,356.4 | 207.6 | 655.6 | 521.3 | 134.30 | 4.882 | | |
| 9,900.0 | 6,268.0 | 9,842.3 | 6,268.0 | 70.1 | 69.0 | -90.00 | 3,456.4 | 208.7 | 654.8 | 516.8 | 138.05 | 4.743 | | |
| 10,000.0 | 6,268.0 | 9,942.3 | 6,268.0 | 71.9 | 70.9 | -90.00 | 3,556.4 | 209.8 | 654.0 | 512.2 | 141.81 | 4.612 | | |
| 10,100.0 | 6,268.0 | 10,042.3 | 6,268.0 | 73.8 | 72.8 | -90.00 | 3,656.3 | 210.9 | 653.2 | 507.7 | 145.57 | 4.488 | | |
| 10,200.0 | 6,268.0 | 10,142.3 | 6,268.0 | 75.7 | 74.7 | -90.00 | 3,756.3 | 212.1 | 652.4 | 503.1 | 149.33 | 4.369 | | |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design Latham 34-2 Pad Sec. 2-T4N-R63W - Latham 34-31-2HNB - Wellbore #1 - Plan #1 (11-12-13) | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|------------------------|------------------------|------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|-------------------------------|---------------------------|---------|
| Survey Program: 0-MWD | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | Offset | Semi Major Axis | | Distance | | | | | | | | | |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning |
| 10,300.0 | 6,268.0 | 10,242.3 | 6,268.0 | 77.5 | 76.6 | -90.00 | 3,856.3 | 213.2 | 651.6 | 498.5 | 153.09 | 4.256 | |
| 10,400.0 | 6,268.0 | 10,342.3 | 6,268.0 | 79.4 | 78.4 | -90.00 | 3,956.3 | 214.3 | 650.8 | 494.0 | 156.86 | 4.149 | |
| 10,500.0 | 6,268.0 | 10,442.3 | 6,268.0 | 81.2 | 80.3 | -90.00 | 4,056.3 | 215.5 | 650.0 | 489.4 | 160.63 | 4.047 | |
| 10,600.0 | 6,268.0 | 10,542.3 | 6,268.0 | 83.1 | 82.2 | -90.00 | 4,156.3 | 216.6 | 649.2 | 484.8 | 164.41 | 3.949 | |
| 10,700.0 | 6,268.0 | 10,642.3 | 6,268.0 | 85.0 | 84.1 | -90.00 | 4,256.3 | 217.7 | 648.4 | 480.2 | 168.19 | 3.855 | |
| 10,800.0 | 6,268.0 | 10,742.3 | 6,268.0 | 86.9 | 86.0 | -90.00 | 4,356.3 | 218.9 | 647.6 | 475.6 | 171.97 | 3.766 | |
| 10,900.0 | 6,268.0 | 10,842.3 | 6,268.0 | 88.7 | 87.9 | -90.00 | 4,456.3 | 220.0 | 646.8 | 471.1 | 175.75 | 3.680 | |
| 10,922.6 | 6,268.0 | 10,859.7 | 6,268.0 | 89.2 | 88.2 | -90.00 | 4,473.7 | 220.2 | 646.6 | 470.1 | 176.51 | 3.664 | |
| 10,932.1 | 6,268.0 | 10,859.7 | 6,268.0 | 89.3 | 88.2 | -90.00 | 4,473.7 | 220.2 | 646.7 | 470.0 | 176.69 | 3.660 | |

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 77-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 134.80 | -69.2 | 69.7 | 98.2 | | | | | |
| 100.0 | 100.0 | 100.6 | 100.6 | 0.1 | 0.1 | 135.06 | -69.1 | 68.9 | 97.6 | 97.3 | 0.25 | 393.459 | | |
| 128.7 | 128.7 | 128.7 | 128.7 | 0.2 | 0.2 | 135.14 | -69.1 | 68.8 | 97.5 | 97.1 | 0.37 | 263.314 CC, ES | | |
| 200.0 | 200.0 | 198.5 | 198.5 | 0.3 | 0.3 | 135.14 | -69.5 | 69.1 | 98.0 | 97.3 | 0.68 | 145.085 | | |
| 300.0 | 300.0 | 296.5 | 296.5 | 0.6 | 0.6 | 134.39 | -70.3 | 71.8 | 100.5 | 99.4 | 1.11 | 90.448 | | |
| 400.0 | 400.0 | 394.1 | 394.0 | 0.8 | 0.8 | 132.92 | -71.5 | 76.9 | 105.1 | 103.6 | 1.56 | 67.276 | | |
| 500.0 | 500.0 | 490.9 | 490.4 | 1.0 | 1.0 | 130.96 | -73.3 | 84.5 | 112.2 | 110.2 | 2.04 | 55.125 | | |
| 600.0 | 600.0 | 587.0 | 585.9 | 1.2 | 1.3 | 128.61 | -75.8 | 94.9 | 122.2 | 119.7 | 2.53 | 48.237 | | |
| 700.0 | 700.0 | 682.2 | 680.1 | 1.5 | 1.6 | 125.68 | -78.1 | 108.8 | 135.4 | 132.3 | 3.06 | 44.252 | | |
| 800.0 | 800.0 | 777.7 | 774.0 | 1.7 | 1.9 | 122.72 | -80.6 | 125.5 | 151.4 | 147.8 | 3.63 | 41.669 | | |
| 900.0 | 900.0 | 870.8 | 865.2 | 1.9 | 2.3 | 120.24 | -83.9 | 143.9 | 170.2 | 165.9 | 4.25 | 40.065 | | |
| 1,000.0 | 1,000.0 | 962.1 | 954.0 | 2.1 | 2.8 | 118.11 | -88.0 | 164.7 | 192.3 | 187.4 | 4.90 | 39.282 | | |
| 1,100.0 | 1,100.0 | 1,051.6 | 1,040.3 | 2.4 | 3.2 | 116.05 | -92.1 | 188.4 | 218.1 | 212.5 | 5.58 | 39.078 | | |
| 1,200.0 | 1,200.0 | 1,141.1 | 1,125.6 | 2.6 | 3.8 | 114.18 | -96.4 | 214.7 | 246.8 | 240.5 | 6.32 | 39.041 | | |
| 1,300.0 | 1,300.0 | 1,232.0 | 1,211.7 | 2.8 | 4.3 | 112.35 | -100.2 | 243.7 | 277.9 | 270.8 | 7.11 | 39.109 | | |
| 1,400.0 | 1,400.0 | 1,323.8 | 1,298.1 | 3.0 | 4.9 | 110.35 | -101.9 | 274.8 | 310.3 | 302.4 | 7.90 | 39.258 | | |
| 1,500.0 | 1,500.0 | 1,418.6 | 1,387.1 | 3.3 | 5.5 | 108.67 | -103.8 | 307.2 | 343.4 | 334.7 | 8.72 | 39.376 | | |
| 1,600.0 | 1,600.0 | 1,523.3 | 1,486.3 | 3.5 | 6.1 | 107.43 | -107.0 | 340.9 | 374.9 | 365.4 | 9.55 | 39.255 | | |
| 1,700.0 | 1,700.0 | 1,622.9 | 1,581.1 | 3.7 | 6.7 | -3.68 | -110.0 | 371.0 | 403.2 | 395.4 | 7.75 | 52.045 | | |
| 1,800.0 | 1,799.8 | 1,725.1 | 1,678.8 | 3.9 | 7.2 | -4.59 | -112.1 | 401.1 | 427.1 | 418.9 | 8.21 | 52.043 | | |
| 1,900.0 | 1,899.5 | 1,823.3 | 1,772.8 | 4.1 | 7.8 | -5.40 | -113.9 | 429.2 | 446.7 | 438.1 | 8.66 | 51.573 | | |
| 2,000.0 | 1,998.7 | 1,917.5 | 1,863.0 | 4.3 | 8.3 | -6.01 | -116.9 | 456.4 | 463.7 | 454.6 | 9.11 | 50.873 | | |
| 2,100.0 | 2,097.5 | 2,011.6 | 1,952.8 | 4.6 | 8.9 | -6.43 | -121.6 | 484.1 | 478.3 | 468.7 | 9.58 | 49.948 | | |
| 2,200.0 | 2,195.6 | 2,109.9 | 2,046.5 | 4.8 | 9.5 | -6.85 | -127.0 | 513.5 | 490.0 | 480.0 | 10.05 | 48.775 | | |
| 2,300.0 | 2,293.1 | 2,206.2 | 2,138.1 | 5.2 | 10.1 | -7.41 | -131.4 | 542.7 | 498.7 | 488.2 | 10.51 | 47.431 | | |
| 2,390.0 | 2,380.1 | 2,290.9 | 2,218.4 | 5.5 | 10.6 | -7.85 | -136.2 | 569.0 | 504.4 | 493.4 | 10.93 | 46.133 | | |
| 2,400.0 | 2,389.6 | 2,300.2 | 2,227.2 | 5.5 | 10.7 | -7.90 | -136.7 | 572.0 | 504.9 | 493.9 | 10.98 | 45.965 | | |
| 2,500.0 | 2,485.9 | 2,393.4 | 2,315.3 | 6.0 | 11.3 | -8.35 | -142.7 | 601.9 | 511.0 | 499.5 | 11.51 | 44.407 | | |
| 2,600.0 | 2,582.1 | 2,485.1 | 2,401.5 | 6.4 | 12.0 | -8.73 | -149.2 | 632.5 | 518.5 | 506.5 | 12.04 | 43.060 | | |
| 2,700.0 | 2,678.3 | 2,577.1 | 2,487.5 | 6.9 | 12.7 | -9.01 | -157.0 | 664.3 | 527.6 | 515.0 | 12.59 | 41.910 | | |
| 2,800.0 | 2,774.5 | 2,671.0 | 2,574.7 | 7.4 | 13.4 | -9.00 | -167.5 | 697.4 | 538.0 | 524.8 | 13.15 | 40.912 | | |
| 2,900.0 | 2,870.8 | 2,777.1 | 2,673.4 | 7.9 | 14.1 | -8.99 | -179.6 | 734.6 | 548.2 | 534.5 | 13.75 | 39.877 | | |
| 3,000.0 | 2,967.0 | 2,867.6 | 2,757.6 | 8.4 | 14.8 | -9.15 | -188.2 | 766.6 | 558.4 | 544.1 | 14.31 | 39.033 | | |
| 3,100.0 | 3,063.2 | 2,958.2 | 2,841.2 | 8.9 | 15.5 | -9.47 | -195.5 | 800.6 | 570.5 | 555.7 | 14.88 | 38.344 | | |
| 3,200.0 | 3,159.4 | 3,053.8 | 2,929.1 | 9.4 | 16.2 | -10.08 | -200.6 | 837.8 | 583.7 | 568.2 | 15.49 | 37.691 | | |
| 3,300.0 | 3,255.6 | 3,172.4 | 3,038.7 | 10.0 | 17.1 | -11.14 | -203.1 | 882.9 | 595.5 | 579.4 | 16.18 | 36.808 | | |
| 3,400.0 | 3,351.9 | 3,309.6 | 3,167.9 | 10.5 | 18.0 | -12.44 | -203.8 | 929.0 | 602.6 | 585.7 | 16.92 | 35.607 | | |
| 3,500.0 | 3,448.1 | 3,415.5 | 3,268.9 | 11.0 | 18.6 | -13.23 | -205.9 | 960.8 | 606.2 | 588.7 | 17.56 | 34.529 | | |
| 3,600.0 | 3,544.3 | 3,501.3 | 3,350.7 | 11.6 | 19.2 | -13.67 | -209.7 | 986.6 | 610.4 | 592.2 | 18.14 | 33.648 | | |
| 3,700.0 | 3,640.5 | 3,587.7 | 3,432.2 | 12.1 | 19.7 | -13.94 | -215.5 | 1,014.7 | 617.2 | 598.5 | 18.73 | 32.959 | | |
| 3,800.0 | 3,736.7 | 3,684.7 | 3,523.3 | 12.7 | 20.4 | -14.20 | -222.5 | 1,047.1 | 625.1 | 605.8 | 19.36 | 32.282 | | |
| 3,900.0 | 3,833.0 | 3,795.2 | 3,627.5 | 13.3 | 21.1 | -14.60 | -229.3 | 1,083.5 | 632.5 | 612.4 | 20.05 | 31.545 | | |
| 4,000.0 | 3,929.2 | 3,892.9 | 3,719.9 | 13.8 | 21.8 | -15.02 | -234.3 | 1,114.9 | 638.9 | 618.2 | 20.70 | 30.863 | | |
| 4,100.0 | 4,025.4 | 3,987.8 | 3,809.3 | 14.4 | 22.4 | -15.37 | -239.9 | 1,145.9 | 646.0 | 624.7 | 21.34 | 30.270 | | |
| 4,200.0 | 4,121.6 | 4,085.4 | 3,901.2 | 14.9 | 23.1 | -15.89 | -243.7 | 1,178.7 | 654.0 | 631.9 | 22.02 | 29.694 | | |
| 4,300.0 | 4,217.9 | 4,205.5 | 4,014.9 | 15.5 | 23.9 | -16.65 | -246.8 | 1,217.2 | 660.3 | 637.5 | 22.79 | 28.967 | | |
| 4,400.0 | 4,314.1 | 4,302.1 | 4,106.7 | 16.1 | 24.4 | -17.20 | -249.7 | 1,247.0 | 665.4 | 641.9 | 23.48 | 28.341 | | |
| 4,500.0 | 4,410.3 | 4,414.6 | 4,213.8 | 16.7 | 25.1 | -17.72 | -254.4 | 1,281.2 | 670.2 | 646.0 | 24.22 | 27.675 | | |
| 4,600.0 | 4,506.5 | 4,517.8 | 4,312.7 | 17.2 | 25.7 | -18.16 | -259.1 | 1,310.7 | 673.1 | 648.1 | 24.92 | 27.009 | | |
| 4,700.0 | 4,602.7 | 4,611.6 | 4,402.3 | 17.8 | 26.3 | -18.57 | -263.1 | 1,338.0 | 676.6 | 651.0 | 25.60 | 26.425 | | |
| 4,800.0 | 4,699.0 | 4,704.2 | 4,490.5 | 18.4 | 26.9 | -18.95 | -267.4 | 1,365.8 | 681.1 | 654.8 | 26.29 | 25.904 | | |
| 4,900.0 | 4,795.2 | 4,805.4 | 4,586.7 | 18.9 | 27.5 | -19.38 | -271.8 | 1,396.7 | 686.2 | 659.1 | 27.02 | 25.392 | | |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 77-MWD | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | |
| 4,925.7 | 4,819.9 | 4,831.7 | 4,611.8 | 19.1 | 27.7 | -19.51 | -272.7 | 1,404.7 | 687.4 | 660.2 | 27.22 | 25.257 | |
| 5,000.0 | 4,891.7 | 4,909.4 | 4,685.9 | 19.5 | 28.1 | -19.93 | -275.0 | 1,428.0 | 691.7 | 664.0 | 27.75 | 24.928 | |
| 5,100.0 | 4,989.0 | 5,029.7 | 4,801.0 | 19.8 | 28.8 | -20.55 | -277.6 | 1,462.7 | 699.3 | 670.9 | 28.46 | 24.577 | |
| 5,200.0 | 5,087.0 | 5,167.2 | 4,934.4 | 20.2 | 29.5 | -21.22 | -279.0 | 1,495.9 | 705.2 | 676.1 | 29.16 | 24.189 | |
| 5,300.0 | 5,185.7 | 5,293.0 | 5,057.8 | 20.5 | 29.9 | -21.96 | -277.2 | 1,520.6 | 709.9 | 680.1 | 29.77 | 23.845 | |
| 5,400.0 | 5,284.9 | 5,437.5 | 5,200.4 | 20.8 | 30.4 | -22.56 | -276.1 | 1,543.1 | 714.0 | 683.6 | 30.33 | 23.536 | |
| 5,500.0 | 5,384.4 | 5,590.8 | 5,353.3 | 21.0 | 30.7 | -23.00 | -275.7 | 1,555.1 | 713.2 | 682.4 | 30.79 | 23.162 | |
| 5,600.0 | 5,484.3 | 5,709.6 | 5,472.0 | 21.1 | 30.8 | -23.26 | -274.7 | 1,558.4 | 710.6 | 679.5 | 31.07 | 22.870 | |
| 5,676.9 | 5,561.2 | 5,790.0 | 5,552.4 | 21.2 | 30.9 | -23.35 | -274.3 | 1,559.4 | 709.7 | 678.5 | 31.21 | 22.739 | |
| 5,700.0 | 5,584.2 | 5,812.8 | 5,575.2 | 21.3 | 31.0 | -23.37 | -274.2 | 1,559.7 | 709.8 | 678.5 | 31.25 | 22.716 | |
| 5,715.8 | 5,600.0 | 5,828.5 | 5,590.9 | 21.3 | 31.0 | 86.84 | -274.1 | 1,559.9 | 710.0 | 678.6 | 31.32 | 22.669 | |
| 5,800.0 | 5,684.2 | 5,928.5 | 5,690.8 | 21.4 | 31.0 | 86.58 | -271.0 | 1,560.2 | 710.3 | 678.7 | 31.65 | 22.445 | |
| 5,837.0 | 5,721.2 | 5,971.6 | 5,733.6 | 21.4 | 31.1 | 86.17 | -265.9 | 1,559.2 | 709.8 | 677.9 | 31.85 | 22.284 | |
| 5,850.0 | 5,734.2 | 5,984.8 | 5,746.6 | 21.4 | 31.1 | 85.84 | -263.7 | 1,558.8 | 709.5 | 677.7 | 31.87 | 22.260 | |
| 5,900.0 | 5,784.1 | 6,027.4 | 5,788.1 | 21.5 | 31.1 | 85.43 | -254.4 | 1,557.6 | 708.6 | 676.5 | 32.09 | 22.084 | |
| 5,950.0 | 5,833.4 | 6,068.3 | 5,827.3 | 21.5 | 31.1 | 85.08 | -242.6 | 1,556.7 | 708.0 | 675.8 | 32.23 | 21.970 | |
| 6,000.0 | 5,881.6 | 6,111.7 | 5,867.9 | 21.5 | 31.1 | 84.78 | -227.2 | 1,556.0 | 707.5 | 675.2 | 32.30 | 21.907 | |
| 6,050.0 | 5,928.4 | 6,160.9 | 5,912.4 | 21.5 | 31.1 | 84.55 | -206.4 | 1,555.1 | 707.0 | 674.7 | 32.30 | 21.884 | |
| 6,100.0 | 5,973.2 | 6,207.3 | 5,952.9 | 21.5 | 31.0 | 84.45 | -183.8 | 1,554.1 | 706.0 | 673.8 | 32.24 | 21.897 | |
| 6,150.0 | 6,015.7 | 6,255.0 | 5,993.1 | 21.5 | 31.0 | 84.50 | -158.1 | 1,553.0 | 704.9 | 672.7 | 32.13 | 21.938 | |
| 6,200.0 | 6,055.6 | 6,302.2 | 6,031.6 | 21.4 | 31.0 | 84.78 | -130.8 | 1,551.9 | 703.5 | 671.5 | 31.98 | 21.995 | |
| 6,250.0 | 6,092.3 | 6,353.3 | 6,070.8 | 21.4 | 31.0 | 85.18 | -98.2 | 1,550.3 | 701.6 | 669.7 | 31.85 | 22.026 | |
| 6,300.0 | 6,125.6 | 6,399.8 | 6,103.1 | 21.3 | 31.0 | 85.55 | -64.7 | 1,548.6 | 699.4 | 667.6 | 31.79 | 22.004 | |
| 6,350.0 | 6,155.2 | 6,446.9 | 6,131.9 | 21.3 | 31.0 | 85.89 | -27.6 | 1,546.6 | 697.1 | 665.3 | 31.80 | 21.922 | |
| 6,400.0 | 6,180.8 | 6,493.1 | 6,157.1 | 21.3 | 31.0 | 86.29 | 11.1 | 1,544.6 | 694.7 | 662.8 | 31.90 | 21.776 | |
| 6,450.0 | 6,202.2 | 6,535.6 | 6,178.1 | 21.2 | 31.0 | 86.79 | 48.0 | 1,542.9 | 692.4 | 660.3 | 32.07 | 21.589 | |
| 6,500.0 | 6,219.2 | 6,575.8 | 6,195.1 | 21.2 | 31.0 | 87.31 | 84.4 | 1,541.7 | 690.4 | 658.1 | 32.33 | 21.358 | |
| 6,518.8 | 6,224.4 | 6,590.9 | 6,200.6 | 21.2 | 31.0 | 87.49 | 98.4 | 1,541.3 | 689.8 | 657.4 | 32.44 | 21.262 | |
| 6,599.5 | 6,245.2 | 6,650.8 | 6,218.2 | 21.2 | 31.1 | 87.67 | 155.6 | 1,540.7 | 688.6 | 655.5 | 33.11 | 20.798 | |
| 6,600.0 | 6,245.4 | 6,651.2 | 6,218.3 | 21.2 | 31.1 | 87.67 | 156.1 | 1,540.7 | 688.6 | 655.5 | 33.12 | 20.795 | |
| 6,618.8 | 6,250.3 | 6,666.9 | 6,222.2 | 21.2 | 31.1 | 87.66 | 171.3 | 1,540.8 | 688.7 | 655.4 | 33.31 | 20.673 | |
| 6,650.0 | 6,257.4 | 6,694.3 | 6,228.9 | 21.2 | 31.1 | 87.67 | 197.8 | 1,541.1 | 688.9 | 655.2 | 33.69 | 20.451 | |
| 6,700.0 | 6,265.1 | 6,743.5 | 6,239.4 | 21.3 | 31.2 | 87.89 | 245.9 | 1,541.7 | 689.3 | 654.9 | 34.38 | 20.051 | |
| 6,750.0 | 6,268.0 | 6,787.6 | 6,246.6 | 21.4 | 31.3 | 88.23 | 289.4 | 1,542.2 | 689.5 | 654.4 | 35.10 | 19.647 | |
| 6,755.2 | 6,268.0 | 6,791.4 | 6,247.1 | 21.4 | 31.3 | 88.26 | 293.1 | 1,542.3 | 689.6 | 654.4 | 35.17 | 19.608 | |
| 6,800.0 | 6,268.0 | 6,826.0 | 6,251.2 | 21.6 | 31.4 | 88.60 | 327.5 | 1,543.2 | 690.5 | 654.7 | 35.81 | 19.282 | |
| 6,900.0 | 6,268.0 | 6,915.5 | 6,258.3 | 22.0 | 31.8 | 89.20 | 416.6 | 1,547.5 | 694.7 | 657.2 | 37.53 | 18.512 | |
| 7,000.0 | 6,268.0 | 7,050.1 | 6,256.6 | 22.7 | 32.4 | 89.06 | 551.1 | 1,550.7 | 696.8 | 656.8 | 40.04 | 17.402 | |
| 7,100.0 | 6,268.0 | 7,173.0 | 6,255.5 | 23.6 | 33.1 | 88.97 | 673.9 | 1,548.1 | 694.4 | 651.9 | 42.55 | 16.321 | |
| 7,200.0 | 6,268.0 | 7,273.3 | 6,256.8 | 24.7 | 33.7 | 89.07 | 774.1 | 1,544.8 | 690.8 | 645.8 | 45.01 | 15.346 | |
| 7,300.0 | 6,268.0 | 7,383.8 | 6,257.8 | 25.8 | 34.4 | 89.15 | 884.5 | 1,540.4 | 686.5 | 638.5 | 47.92 | 14.325 | |
| 7,400.0 | 6,268.0 | 7,474.8 | 6,257.3 | 27.1 | 35.1 | 89.10 | 975.5 | 1,535.9 | 681.3 | 630.6 | 50.63 | 13.455 | |
| 7,500.0 | 6,268.0 | 7,579.8 | 6,256.5 | 28.5 | 36.1 | 89.02 | 1,080.4 | 1,532.1 | 677.4 | 623.8 | 53.60 | 12.637 | |
| 7,600.0 | 6,268.0 | 7,663.7 | 6,255.7 | 30.0 | 36.9 | 88.95 | 1,164.2 | 1,529.1 | 673.5 | 617.0 | 56.44 | 11.931 | |
| 7,700.0 | 6,268.0 | 7,760.5 | 6,253.6 | 31.5 | 37.9 | 88.77 | 1,261.0 | 1,526.9 | 670.9 | 611.4 | 59.52 | 11.272 | |
| 7,800.0 | 6,268.0 | 7,864.8 | 6,253.9 | 33.1 | 39.0 | 88.79 | 1,365.2 | 1,524.6 | 668.3 | 605.6 | 62.70 | 10.659 | |
| 7,900.0 | 6,268.0 | 7,960.0 | 6,255.7 | 34.7 | 40.1 | 88.94 | 1,460.4 | 1,522.4 | 665.7 | 599.9 | 65.81 | 10.114 | |
| 8,000.0 | 6,268.0 | 8,059.8 | 6,257.8 | 36.3 | 41.3 | 89.12 | 1,560.1 | 1,520.5 | 663.5 | 594.4 | 69.06 | 9.606 | |
| 8,100.0 | 6,268.0 | 8,149.2 | 6,259.3 | 37.9 | 42.5 | 89.25 | 1,649.6 | 1,519.9 | 662.4 | 590.2 | 72.19 | 9.177 | |
| 8,114.1 | 6,268.0 | 8,160.6 | 6,259.5 | 38.2 | 42.6 | 89.26 | 1,660.9 | 1,519.9 | 662.4 | 589.8 | 72.61 | 9.122 | |
| 8,200.0 | 6,268.0 | 8,245.3 | 6,260.6 | 39.6 | 43.7 | 89.36 | 1,745.6 | 1,520.5 | 662.6 | 587.2 | 75.45 | 8.783 | |
| 8,300.0 | 6,268.0 | 8,342.7 | 6,261.0 | 41.3 | 45.1 | 89.39 | 1,843.0 | 1,521.3 | 663.2 | 584.4 | 78.82 | 8.414 | |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Latham 34-2 Pad Sec. 2-T4N-R63W - Latham 44-41-2HNB (Exist.) - Wellbore #1 - Wellbore #1 | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Survey Program: 77-MWD | | | | | | | | | | | | | |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | |
| 8,400.0 | 6,268.0 | 8,443.5 | 6,259.9 | 43.0 | 46.5 | 89.30 | 1,943.8 | 1,522.7 | 664.2 | 581.9 | 82.26 | 8.075 | |
| 8,500.0 | 6,268.0 | 8,548.3 | 6,259.3 | 44.8 | 48.0 | 89.25 | 2,048.6 | 1,522.7 | 663.9 | 578.1 | 85.79 | 7.739 | |
| 8,600.0 | 6,268.0 | 8,654.5 | 6,258.8 | 46.5 | 49.6 | 89.20 | 2,154.8 | 1,522.1 | 663.0 | 573.7 | 89.37 | 7.419 | |
| 8,700.0 | 6,268.0 | 8,766.2 | 6,258.2 | 48.3 | 51.2 | 89.15 | 2,266.5 | 1,520.6 | 661.4 | 568.3 | 93.07 | 7.107 | |
| 8,800.0 | 6,268.0 | 8,871.8 | 6,258.1 | 50.1 | 52.8 | 89.14 | 2,372.0 | 1,517.9 | 658.5 | 561.9 | 96.68 | 6.812 | |
| 8,900.0 | 6,268.0 | 8,969.8 | 6,258.2 | 51.9 | 54.3 | 89.14 | 2,470.0 | 1,514.5 | 654.7 | 554.5 | 100.16 | 6.536 | |
| 9,000.0 | 6,268.0 | 9,048.9 | 6,258.3 | 53.7 | 55.4 | 89.15 | 2,549.0 | 1,512.9 | 652.5 | 549.1 | 103.31 | 6.315 | |
| 9,100.0 | 6,268.0 | 9,155.2 | 6,258.5 | 55.5 | 57.1 | 89.17 | 2,655.3 | 1,513.1 | 652.3 | 545.4 | 106.94 | 6.100 | |
| 9,200.0 | 6,268.0 | 9,256.2 | 6,258.8 | 57.3 | 58.7 | 89.19 | 2,756.3 | 1,512.1 | 651.0 | 540.5 | 110.55 | 5.889 | |
| 9,300.0 | 6,268.0 | 9,356.2 | 6,258.8 | 59.1 | 60.3 | 89.18 | 2,856.3 | 1,510.1 | 648.7 | 534.6 | 114.13 | 5.684 | |
| 9,400.0 | 6,268.0 | 9,449.6 | 6,259.4 | 60.9 | 61.7 | 89.24 | 2,949.7 | 1,509.4 | 647.6 | 530.1 | 117.54 | 5.510 | |
| 9,454.2 | 6,268.0 | 9,501.0 | 6,260.2 | 61.9 | 62.5 | 89.31 | 3,001.1 | 1,509.5 | 647.5 | 528.2 | 119.38 | 5.424 | |
| 9,500.0 | 6,268.0 | 9,538.7 | 6,260.5 | 62.7 | 63.1 | 89.34 | 3,038.9 | 1,509.8 | 647.8 | 526.9 | 120.87 | 5.360 | |
| 9,600.0 | 6,268.0 | 9,653.4 | 6,260.9 | 64.6 | 65.0 | 89.37 | 3,153.5 | 1,510.0 | 647.6 | 522.9 | 124.72 | 5.193 | |
| 9,700.0 | 6,268.0 | 9,757.0 | 6,261.4 | 66.4 | 66.7 | 89.42 | 3,257.1 | 1,508.5 | 645.8 | 517.4 | 128.39 | 5.030 | |
| 9,800.0 | 6,268.0 | 9,859.6 | 6,260.1 | 68.3 | 68.4 | 89.30 | 3,359.7 | 1,506.8 | 643.8 | 511.7 | 132.09 | 4.874 | |
| 9,900.0 | 6,268.0 | 9,952.0 | 6,256.2 | 70.1 | 69.9 | 88.95 | 3,451.9 | 1,505.5 | 642.1 | 506.5 | 135.63 | 4.734 | |
| 9,918.6 | 6,268.0 | 9,967.7 | 6,255.6 | 70.4 | 70.2 | 88.90 | 3,467.7 | 1,505.4 | 642.0 | 505.8 | 136.26 | 4.712 | |
| 10,000.0 | 6,268.0 | 10,047.6 | 6,253.8 | 71.9 | 71.4 | 88.74 | 3,547.6 | 1,506.3 | 642.6 | 503.5 | 139.11 | 4.620 | |
| 10,100.0 | 6,268.0 | 10,151.1 | 6,256.0 | 73.8 | 73.1 | 88.93 | 3,651.0 | 1,506.2 | 642.2 | 499.4 | 142.74 | 4.499 | |
| 10,200.0 | 6,268.0 | 10,252.8 | 6,258.2 | 75.7 | 74.9 | 89.12 | 3,752.6 | 1,505.5 | 641.1 | 494.7 | 146.41 | 4.379 | |
| 10,300.0 | 6,268.0 | 10,353.7 | 6,258.9 | 77.5 | 76.6 | 89.18 | 3,853.5 | 1,504.6 | 639.8 | 489.8 | 150.08 | 4.263 | |
| 10,400.0 | 6,268.0 | 10,455.7 | 6,257.8 | 79.4 | 78.3 | 89.08 | 3,955.6 | 1,503.3 | 638.3 | 484.5 | 153.76 | 4.151 | |
| 10,465.7 | 6,268.0 | 10,512.6 | 6,257.8 | 80.6 | 79.2 | 89.08 | 4,012.5 | 1,503.0 | 637.7 | 481.8 | 155.95 | 4.089 | |
| 10,500.0 | 6,268.0 | 10,543.6 | 6,257.9 | 81.2 | 79.7 | 89.10 | 4,043.4 | 1,503.2 | 637.9 | 480.8 | 157.12 | 4.060 | |
| 10,600.0 | 6,268.0 | 10,647.8 | 6,258.4 | 83.1 | 81.4 | 89.14 | 4,147.6 | 1,504.0 | 638.3 | 477.5 | 160.80 | 3.970 | |
| 10,700.0 | 6,268.0 | 10,762.5 | 6,260.3 | 85.0 | 83.4 | 89.30 | 4,262.3 | 1,502.5 | 636.6 | 471.9 | 164.69 | 3.865 | |
| 10,800.0 | 6,268.0 | 10,860.2 | 6,261.4 | 86.9 | 85.0 | 89.41 | 4,360.0 | 1,501.0 | 634.7 | 466.4 | 168.30 | 3.771 | |
| 10,900.0 | 6,268.0 | 10,963.5 | 6,261.9 | 88.7 | 86.8 | 89.44 | 4,463.3 | 1,498.8 | 632.2 | 460.2 | 172.05 | 3.675 | |
| 10,932.1 | 6,268.0 | 10,983.0 | 6,261.9 | 89.3 | 87.2 | 89.45 | 4,482.8 | 1,498.4 | 631.5 | 458.5 | 173.00 | 3.650 SF | |

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design Latham 34-2 Pad Sec. 2-T4N-R63W - Latham O34-K31-2HC - Wellbore #1 - Plan #1 (11-12-13) | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 133.78 | -40.1 | 41.8 | 57.9 | | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 133.78 | -40.1 | 41.8 | 57.9 | 57.7 | 0.22 | 257.689 | | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 133.78 | -40.1 | 41.8 | 57.9 | 57.2 | 0.67 | 85.896 | | |
| 300.0 | 300.0 | 300.7 | 300.7 | 0.6 | 0.5 | 135.43 | -40.8 | 40.2 | 57.3 | 56.2 | 1.11 | 51.583 | | |
| 400.0 | 400.0 | 401.1 | 401.0 | 0.8 | 0.8 | 140.56 | -43.1 | 35.4 | 55.8 | 54.2 | 1.55 | 35.868 | | |
| 483.1 | 483.1 | 483.5 | 483.1 | 1.0 | 1.0 | 147.52 | -46.1 | 29.4 | 54.7 | 52.7 | 1.93 | 28.294 CC | | |
| 500.0 | 500.0 | 500.0 | 499.5 | 1.0 | 1.0 | 149.07 | -46.9 | 28.1 | 54.7 | 52.7 | 2.01 | 27.291 ES | | |
| 600.0 | 600.0 | 597.7 | 596.7 | 1.2 | 1.2 | 158.20 | -53.7 | 21.5 | 58.0 | 55.5 | 2.43 | 23.862 | | |
| 700.0 | 700.0 | 696.8 | 695.2 | 1.5 | 1.5 | 166.15 | -62.7 | 15.4 | 64.7 | 61.9 | 2.87 | 22.568 | | |
| 800.0 | 800.0 | 796.2 | 794.0 | 1.7 | 1.8 | 172.52 | -71.7 | 9.4 | 72.5 | 69.2 | 3.33 | 21.799 | | |
| 900.0 | 900.0 | 895.6 | 892.8 | 1.9 | 2.1 | 177.61 | -80.7 | 3.4 | 81.1 | 77.3 | 3.81 | 21.307 | | |
| 1,000.0 | 1,000.0 | 995.0 | 991.7 | 2.1 | 2.4 | -178.29 | -89.7 | -2.7 | 90.1 | 85.8 | 4.30 | 20.979 | | |
| 1,100.0 | 1,100.0 | 1,094.4 | 1,090.5 | 2.4 | 2.7 | -174.95 | -98.7 | -8.7 | 99.6 | 94.8 | 4.80 | 20.754 | | |
| 1,200.0 | 1,200.0 | 1,193.8 | 1,189.3 | 2.6 | 3.0 | -172.19 | -107.7 | -14.8 | 109.3 | 104.0 | 5.30 | 20.598 | | |
| 1,300.0 | 1,300.0 | 1,293.2 | 1,288.1 | 2.8 | 3.3 | -169.89 | -116.7 | -20.8 | 119.2 | 113.4 | 5.82 | 20.488 | | |
| 1,400.0 | 1,400.0 | 1,392.6 | 1,386.9 | 3.0 | 3.6 | -167.95 | -125.8 | -26.9 | 129.3 | 122.9 | 6.33 | 20.410 | | |
| 1,500.0 | 1,500.0 | 1,492.0 | 1,485.7 | 3.3 | 3.9 | -166.28 | -134.8 | -32.9 | 139.5 | 132.6 | 6.85 | 20.355 | | |
| 1,600.0 | 1,600.0 | 1,591.4 | 1,584.5 | 3.5 | 4.2 | -164.85 | -143.8 | -38.9 | 149.8 | 142.4 | 7.37 | 20.317 | | |
| 1,700.0 | 1,700.0 | 1,690.8 | 1,683.2 | 3.7 | 4.5 | 86.61 | -152.8 | -45.0 | 160.0 | 152.5 | 7.49 | 21.365 | | |
| 1,800.0 | 1,799.8 | 1,789.9 | 1,781.8 | 3.9 | 4.8 | 89.22 | -161.8 | -51.0 | 170.4 | 162.5 | 7.90 | 21.576 | | |
| 1,900.0 | 1,899.5 | 1,888.7 | 1,880.0 | 4.1 | 5.1 | 92.59 | -170.7 | -57.0 | 181.2 | 172.9 | 8.31 | 21.819 | | |
| 2,000.0 | 1,998.7 | 1,987.0 | 1,977.7 | 4.3 | 5.4 | 96.53 | -179.6 | -63.0 | 193.1 | 184.4 | 8.73 | 22.122 | | |
| 2,100.0 | 2,097.5 | 2,084.8 | 2,074.9 | 4.6 | 5.7 | 100.87 | -188.5 | -68.9 | 206.5 | 197.3 | 9.17 | 22.509 | | |
| 2,200.0 | 2,195.6 | 2,181.9 | 2,171.4 | 4.8 | 6.0 | 105.43 | -197.3 | -74.8 | 222.0 | 212.4 | 9.65 | 23.001 | | |
| 2,300.0 | 2,293.1 | 2,278.1 | 2,267.1 | 5.2 | 6.3 | 110.04 | -206.0 | -80.7 | 240.1 | 229.9 | 10.17 | 23.615 | | |
| 2,390.0 | 2,380.1 | 2,364.0 | 2,352.5 | 5.5 | 6.6 | 114.12 | -213.8 | -85.9 | 258.9 | 248.3 | 10.66 | 24.285 | | |
| 2,400.0 | 2,389.6 | 2,373.5 | 2,361.9 | 5.5 | 6.6 | 114.61 | -214.7 | -86.5 | 261.2 | 250.4 | 10.72 | 24.362 | | |
| 2,500.0 | 2,485.9 | 2,468.4 | 2,456.3 | 6.0 | 6.9 | 119.03 | -223.3 | -92.3 | 284.5 | 273.2 | 11.32 | 25.144 | | |
| 2,600.0 | 2,582.1 | 2,563.4 | 2,550.7 | 6.4 | 7.2 | 122.80 | -231.9 | -98.0 | 309.3 | 297.4 | 11.93 | 25.934 | | |
| 2,700.0 | 2,678.3 | 2,658.3 | 2,645.0 | 6.9 | 7.5 | 126.01 | -240.5 | -103.8 | 335.2 | 322.7 | 12.55 | 26.716 | | |
| 2,800.0 | 2,774.5 | 2,753.3 | 2,739.4 | 7.4 | 7.8 | 128.77 | -249.1 | -109.6 | 362.0 | 348.8 | 13.17 | 27.483 | | |
| 2,900.0 | 2,870.8 | 2,848.2 | 2,833.8 | 7.9 | 8.1 | 131.15 | -257.7 | -115.3 | 389.4 | 375.6 | 13.80 | 28.227 | | |
| 3,000.0 | 2,967.0 | 2,943.2 | 2,928.2 | 8.4 | 8.4 | 133.23 | -266.3 | -121.1 | 417.4 | 403.0 | 14.42 | 28.946 | | |
| 3,100.0 | 3,063.2 | 3,038.1 | 3,022.6 | 8.9 | 8.7 | 135.04 | -274.9 | -126.9 | 445.9 | 430.8 | 15.05 | 29.636 | | |
| 3,200.0 | 3,159.4 | 3,133.1 | 3,116.9 | 9.4 | 9.0 | 136.64 | -283.5 | -132.7 | 474.7 | 459.1 | 15.67 | 30.297 | | |
| 3,300.0 | 3,255.6 | 3,228.0 | 3,211.3 | 10.0 | 9.3 | 138.06 | -292.1 | -138.4 | 503.9 | 487.6 | 16.29 | 30.928 | | |
| 3,400.0 | 3,351.9 | 3,323.0 | 3,305.7 | 10.5 | 9.5 | 139.33 | -300.8 | -144.2 | 533.3 | 516.3 | 16.91 | 31.530 | | |
| 3,500.0 | 3,448.1 | 3,417.9 | 3,400.1 | 11.0 | 9.8 | 140.46 | -309.4 | -150.0 | 562.9 | 545.3 | 17.53 | 32.104 | | |
| 3,600.0 | 3,544.3 | 3,512.8 | 3,494.4 | 11.6 | 10.1 | 141.49 | -318.0 | -155.8 | 592.6 | 574.5 | 18.15 | 32.650 | | |
| 3,700.0 | 3,640.5 | 3,607.8 | 3,588.8 | 12.1 | 10.4 | 142.41 | -326.6 | -161.5 | 622.6 | 603.8 | 18.77 | 33.170 | | |
| 3,800.0 | 3,736.7 | 3,702.7 | 3,683.2 | 12.7 | 10.7 | 143.25 | -335.2 | -167.3 | 652.7 | 633.3 | 19.39 | 33.666 | | |
| 3,900.0 | 3,833.0 | 3,817.2 | 3,797.2 | 13.3 | 11.0 | 144.29 | -343.8 | -173.1 | 681.6 | 661.6 | 19.99 | 34.103 | | |
| 4,000.0 | 3,929.2 | 3,933.8 | 3,913.6 | 13.8 | 11.2 | 145.51 | -348.7 | -176.4 | 707.8 | 687.3 | 20.52 | 34.494 | | |
| 4,100.0 | 4,025.4 | 4,045.6 | 4,025.4 | 14.4 | 11.4 | 146.83 | -349.8 | -177.1 | 731.5 | 710.4 | 21.02 | 34.793 | | |
| 4,200.0 | 4,121.6 | 4,141.8 | 4,121.6 | 14.9 | 11.5 | 147.95 | -349.8 | -177.1 | 754.7 | 733.2 | 21.51 | 35.091 | | |
| 4,300.0 | 4,217.9 | 4,238.0 | 4,217.9 | 15.5 | 11.6 | 149.00 | -349.8 | -177.1 | 778.1 | 756.1 | 21.97 | 35.411 | | |
| 4,400.0 | 4,314.1 | 4,334.3 | 4,314.1 | 16.1 | 11.8 | 150.00 | -349.8 | -177.1 | 801.8 | 779.4 | 22.44 | 35.733 | | |
| 4,500.0 | 4,410.3 | 4,430.5 | 4,410.3 | 16.7 | 11.9 | 150.93 | -349.8 | -177.1 | 825.7 | 802.8 | 22.90 | 36.055 | | |
| 4,600.0 | 4,506.5 | 4,526.7 | 4,506.5 | 17.2 | 12.1 | 151.82 | -349.8 | -177.1 | 849.8 | 826.5 | 23.36 | 36.377 | | |
| 4,700.0 | 4,602.7 | 4,622.9 | 4,602.7 | 17.8 | 12.2 | 152.65 | -349.8 | -177.1 | 874.1 | 850.3 | 23.82 | 36.697 | | |
| 4,800.0 | 4,699.0 | 4,719.1 | 4,699.0 | 18.4 | 12.4 | 153.45 | -349.8 | -177.1 | 898.6 | 874.3 | 24.28 | 37.014 | | |
| 4,900.0 | 4,795.2 | 4,815.4 | 4,795.2 | 18.9 | 12.5 | 154.20 | -349.8 | -177.1 | 923.2 | 898.5 | 24.73 | 37.327 | | |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | Latham 34-2 Pad Sec. 2-T4N-R63W - Latham O34-K31-2HC - Wellbore #1 - Plan #1 (11-12-13) | | | | | | | | | | Offset Site Error: | | 0.0 ft | | | |
|---------------------------------|---------------------------|---|---------------------------|-------------------|----------------|-----------------------------|---|---------------|----------------------------|-----------------------------|-------------------------------|----------------------|--|--------------------|--|--------|--|
| Survey Program: 0-MWD | | | | | | | | | | | | | | Offset Well Error: | | 0.0 ft | |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | Warning | | | |
| Measured Depth Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | | | | | |
| 4,925.7 | 4,819.9 | 4,840.1 | 4,819.9 | 19.1 | 12.5 | 154.38 | -349.8 | -177.1 | 929.5 | 904.7 | 24.85 | 37.407 | | | | | |
| 5,000.0 | 4,891.7 | 4,911.8 | 4,891.7 | 19.5 | 12.7 | 155.04 | -349.8 | -177.1 | 947.1 | 921.9 | 25.23 | 37.538 | | | | | |
| 5,100.0 | 4,989.0 | 5,009.2 | 4,989.0 | 19.8 | 12.8 | 155.79 | -349.8 | -177.1 | 968.1 | 942.4 | 25.69 | 37.683 | | | | | |
| 5,200.0 | 5,087.0 | 5,107.2 | 5,087.0 | 20.2 | 13.0 | 156.40 | -349.8 | -177.1 | 986.1 | 960.0 | 26.13 | 37.739 | | | | | |
| 9,600.0 | 6,268.0 | 9,736.0 | 6,447.0 | 64.6 | 64.5 | -100.31 | 3,164.6 | -121.1 | 999.9 | 873.3 | 126.58 | 7.899 | | | | | |
| 9,700.0 | 6,268.0 | 9,836.0 | 6,447.0 | 66.4 | 66.3 | -100.33 | 3,264.6 | -119.5 | 998.7 | 868.4 | 130.26 | 7.667 | | | | | |
| 9,800.0 | 6,268.0 | 9,936.0 | 6,447.0 | 68.3 | 68.2 | -100.34 | 3,364.6 | -117.9 | 997.4 | 863.5 | 133.95 | 7.446 | | | | | |
| 9,900.0 | 6,268.0 | 10,036.0 | 6,447.0 | 70.1 | 70.1 | -100.35 | 3,464.6 | -116.3 | 996.2 | 858.5 | 137.64 | 7.238 | | | | | |
| 10,000.0 | 6,268.0 | 10,136.0 | 6,447.0 | 71.9 | 71.9 | -100.37 | 3,564.5 | -114.8 | 994.9 | 853.6 | 141.33 | 7.040 | | | | | |
| 10,100.0 | 6,268.0 | 10,235.9 | 6,447.0 | 73.8 | 73.8 | -100.38 | 3,664.5 | -113.2 | 993.7 | 848.7 | 145.03 | 6.852 | | | | | |
| 10,200.0 | 6,268.0 | 10,335.9 | 6,447.0 | 75.7 | 75.7 | -100.39 | 3,764.5 | -111.6 | 992.4 | 843.7 | 148.73 | 6.673 | | | | | |
| 10,300.0 | 6,268.0 | 10,435.9 | 6,447.0 | 77.5 | 77.6 | -100.40 | 3,864.5 | -110.0 | 991.2 | 838.8 | 152.43 | 6.502 | | | | | |
| 10,400.0 | 6,268.0 | 10,535.9 | 6,447.0 | 79.4 | 79.5 | -100.42 | 3,964.5 | -108.4 | 990.0 | 833.8 | 156.14 | 6.340 | | | | | |
| 10,500.0 | 6,268.0 | 10,635.9 | 6,447.0 | 81.2 | 81.3 | -100.43 | 4,064.4 | -106.8 | 988.7 | 828.9 | 159.85 | 6.185 | | | | | |
| 10,600.0 | 6,268.0 | 10,735.9 | 6,447.0 | 83.1 | 83.2 | -100.44 | 4,164.4 | -105.2 | 987.5 | 823.9 | 163.57 | 6.037 | | | | | |
| 10,700.0 | 6,268.0 | 10,835.9 | 6,447.0 | 85.0 | 85.1 | -100.46 | 4,264.4 | -103.6 | 986.2 | 818.9 | 167.28 | 5.896 | | | | | |
| 10,800.0 | 6,268.0 | 10,935.9 | 6,447.0 | 86.9 | 87.0 | -100.47 | 4,364.4 | -102.0 | 985.0 | 814.0 | 171.00 | 5.760 | | | | | |
| 10,900.0 | 6,268.0 | 11,035.9 | 6,447.0 | 88.7 | 88.9 | -100.48 | 4,464.3 | -100.4 | 983.7 | 809.0 | 174.72 | 5.630 | | | | | |
| 10,918.6 | 6,268.0 | 11,042.3 | 6,447.0 | 89.1 | 89.0 | -100.49 | 4,470.8 | -100.3 | 983.6 | 808.4 | 175.19 | 5.614 | | | | | |
| 10,932.1 | 6,268.0 | 11,042.3 | 6,447.0 | 89.3 | 89.0 | -100.49 | 4,470.8 | -100.3 | 983.7 | 808.2 | 175.44 | 5.607 SF | | | | | |

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|-------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 138-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 134.43 | -54.7 | 55.8 | 78.1 | | | | | |
| 100.0 | 100.0 | 100.9 | 100.9 | 0.1 | 0.1 | 134.39 | -54.2 | 55.4 | 77.5 | 77.3 | 0.23 | 341.939 | | |
| 200.0 | 200.0 | 200.8 | 200.8 | 0.3 | 0.3 | 134.31 | -53.2 | 54.5 | 76.2 | 75.5 | 0.62 | 122.548 | | |
| 300.0 | 300.0 | 300.7 | 300.7 | 0.6 | 0.5 | 134.34 | -52.6 | 53.8 | 75.2 | 74.2 | 1.05 | 71.454 | | |
| 400.0 | 400.0 | 401.0 | 401.0 | 0.8 | 0.7 | 134.40 | -51.8 | 52.9 | 74.1 | 72.6 | 1.49 | 49.744 | | |
| 500.0 | 500.0 | 501.2 | 501.2 | 1.0 | 0.9 | 133.97 | -50.4 | 52.2 | 72.6 | 70.6 | 1.93 | 37.645 | | |
| 600.0 | 600.0 | 601.1 | 601.1 | 1.2 | 1.1 | 133.20 | -48.6 | 51.7 | 71.0 | 68.6 | 2.36 | 30.025 | | |
| 700.0 | 700.0 | 700.9 | 700.9 | 1.5 | 1.3 | 132.27 | -46.8 | 51.5 | 69.6 | 66.8 | 2.80 | 24.865 | | |
| 800.0 | 800.0 | 800.2 | 800.2 | 1.7 | 1.5 | 131.07 | -45.5 | 52.2 | 69.2 | 66.0 | 3.23 | 21.438 | | |
| 900.0 | 900.0 | 900.8 | 900.7 | 1.9 | 1.8 | 131.63 | -45.6 | 51.3 | 68.6 | 64.9 | 3.66 | 18.728 | | |
| 1,000.0 | 1,000.0 | 1,000.9 | 1,000.8 | 2.1 | 2.0 | 134.78 | -47.5 | 47.9 | 67.5 | 63.4 | 4.10 | 16.471 | | |
| 1,087.3 | 1,087.3 | 1,087.7 | 1,087.3 | 2.3 | 2.2 | 139.87 | -51.2 | 43.1 | 66.9 | 62.5 | 4.48 | 14.926 CC | | |
| 1,100.0 | 1,100.0 | 1,100.3 | 1,099.8 | 2.4 | 2.2 | 140.80 | -51.9 | 42.3 | 67.0 | 62.4 | 4.54 | 14.745 ES | | |
| 1,200.0 | 1,200.0 | 1,199.8 | 1,198.8 | 2.6 | 2.4 | 149.83 | -58.8 | 34.2 | 68.0 | 63.0 | 4.99 | 13.623 | | |
| 1,300.0 | 1,300.0 | 1,298.4 | 1,296.3 | 2.8 | 2.7 | 161.40 | -67.4 | 22.7 | 71.2 | 65.8 | 5.43 | 13.111 SF | | |
| 1,400.0 | 1,400.0 | 1,396.5 | 1,393.0 | 3.0 | 3.0 | 173.01 | -77.6 | 9.5 | 78.5 | 72.6 | 5.88 | 13.357 | | |
| 1,500.0 | 1,500.0 | 1,496.1 | 1,491.4 | 3.3 | 3.3 | -178.43 | -87.4 | -2.4 | 87.9 | 81.5 | 6.32 | 13.898 | | |
| 1,600.0 | 1,600.0 | 1,595.4 | 1,589.6 | 3.5 | 3.5 | -171.71 | -96.5 | -14.1 | 98.1 | 91.3 | 6.78 | 14.461 | | |
| 1,700.0 | 1,700.0 | 1,695.7 | 1,688.8 | 3.7 | 3.8 | 84.52 | -104.7 | -26.1 | 108.3 | 101.0 | 7.34 | 14.767 | | |
| 1,800.0 | 1,799.8 | 1,794.9 | 1,787.1 | 3.9 | 4.1 | 91.45 | -111.7 | -37.8 | 118.6 | 110.9 | 7.74 | 15.330 | | |
| 1,900.0 | 1,899.5 | 1,892.5 | 1,883.8 | 4.1 | 4.4 | 98.82 | -118.1 | -49.8 | 130.7 | 122.6 | 8.13 | 16.083 | | |
| 2,000.0 | 1,998.7 | 1,988.9 | 1,979.1 | 4.3 | 4.7 | 106.01 | -124.8 | -61.9 | 146.3 | 137.7 | 8.53 | 17.158 | | |
| 2,100.0 | 2,097.5 | 2,086.9 | 2,076.1 | 4.6 | 5.0 | 112.91 | -131.3 | -74.0 | 164.8 | 155.9 | 8.93 | 18.460 | | |
| 2,200.0 | 2,195.6 | 2,182.9 | 2,171.3 | 4.8 | 5.3 | 119.08 | -137.4 | -85.3 | 186.4 | 177.0 | 9.34 | 19.952 | | |
| 2,300.0 | 2,293.1 | 2,277.6 | 2,265.2 | 5.2 | 5.6 | 124.38 | -143.8 | -95.9 | 211.6 | 201.8 | 9.77 | 21.654 | | |
| 2,390.0 | 2,380.1 | 2,361.4 | 2,348.2 | 5.5 | 5.8 | 128.68 | -149.2 | -105.6 | 237.6 | 227.4 | 10.17 | 23.366 | | |
| 2,400.0 | 2,389.6 | 2,370.1 | 2,356.9 | 5.5 | 5.9 | 129.15 | -149.7 | -106.7 | 240.7 | 230.5 | 10.22 | 23.560 | | |
| 2,500.0 | 2,485.9 | 2,456.4 | 2,442.3 | 6.0 | 6.2 | 133.36 | -155.3 | -118.2 | 273.7 | 263.0 | 10.70 | 25.587 | | |
| 2,600.0 | 2,582.1 | 2,542.7 | 2,527.3 | 6.4 | 6.5 | 136.84 | -161.0 | -131.6 | 310.0 | 298.8 | 11.19 | 27.698 | | |
| 2,700.0 | 2,678.3 | 2,629.7 | 2,612.8 | 6.9 | 6.8 | 139.84 | -166.1 | -146.7 | 348.5 | 336.9 | 11.69 | 29.813 | | |
| 2,800.0 | 2,774.5 | 2,723.7 | 2,705.2 | 7.4 | 7.1 | 142.49 | -171.5 | -163.2 | 387.9 | 375.7 | 12.20 | 31.794 | | |
| 2,900.0 | 2,870.8 | 2,816.6 | 2,796.7 | 7.9 | 7.4 | 144.57 | -176.9 | -178.6 | 427.1 | 414.4 | 12.71 | 33.603 | | |
| 3,000.0 | 2,967.0 | 2,911.6 | 2,890.2 | 8.4 | 7.8 | 146.25 | -183.0 | -193.9 | 466.2 | 453.0 | 13.23 | 35.244 | | |
| 3,100.0 | 3,063.2 | 3,011.2 | 2,988.5 | 8.9 | 8.1 | 147.58 | -190.4 | -208.3 | 504.4 | 490.6 | 13.77 | 36.638 | | |
| 3,200.0 | 3,159.4 | 3,110.8 | 3,087.0 | 9.4 | 8.4 | 148.60 | -198.5 | -221.2 | 541.4 | 527.1 | 14.32 | 37.819 | | |
| 3,300.0 | 3,255.6 | 3,203.8 | 3,178.8 | 10.0 | 8.7 | 149.36 | -206.6 | -232.3 | 577.7 | 562.8 | 14.86 | 38.870 | | |
| 3,400.0 | 3,351.9 | 3,292.3 | 3,266.3 | 10.5 | 9.0 | 149.94 | -214.9 | -243.2 | 614.4 | 599.0 | 15.41 | 39.871 | | |
| 3,500.0 | 3,448.1 | 3,376.4 | 3,349.3 | 11.0 | 9.3 | 150.45 | -222.8 | -254.4 | 652.3 | 636.3 | 15.96 | 40.879 | | |
| 3,600.0 | 3,544.3 | 3,456.5 | 3,428.1 | 11.6 | 9.6 | 150.90 | -230.2 | -266.4 | 691.5 | 675.0 | 16.50 | 41.919 | | |
| 3,700.0 | 3,640.5 | 3,538.8 | 3,508.9 | 12.1 | 9.9 | 151.35 | -237.8 | -280.1 | 732.4 | 715.4 | 17.04 | 42.975 | | |
| 3,800.0 | 3,736.7 | 3,633.1 | 3,601.5 | 12.7 | 10.3 | 151.79 | -246.6 | -295.9 | 773.5 | 755.9 | 17.62 | 43.909 | | |
| 3,900.0 | 3,833.0 | 3,736.4 | 3,703.0 | 13.3 | 10.7 | 152.23 | -256.1 | -312.3 | 813.9 | 795.7 | 18.20 | 44.711 | | |
| 4,000.0 | 3,929.2 | 3,834.6 | 3,799.8 | 13.8 | 11.0 | 152.66 | -264.3 | -326.8 | 853.0 | 834.2 | 18.77 | 45.436 | | |
| 4,100.0 | 4,025.4 | 3,927.4 | 3,891.3 | 14.4 | 11.4 | 153.05 | -271.7 | -340.1 | 891.8 | 872.5 | 19.33 | 46.132 | | |
| 4,200.0 | 4,121.6 | 4,016.1 | 3,978.8 | 14.9 | 11.7 | 153.40 | -278.6 | -353.0 | 930.9 | 911.0 | 19.88 | 46.815 | | |
| 4,300.0 | 4,217.9 | 4,099.8 | 4,061.3 | 15.5 | 12.0 | 153.70 | -285.2 | -365.7 | 970.4 | 950.0 | 20.43 | 47.495 | | |

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 136.27 | -29.1 | 27.9 | 40.3 | | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 136.27 | -29.1 | 27.9 | 40.3 | 40.1 | 0.22 | 179.438 | | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 136.27 | -29.1 | 27.9 | 40.3 | 39.7 | 0.67 | 59.813 | | |
| 300.0 | 300.0 | 300.0 | 300.0 | 0.6 | 0.6 | 136.27 | -29.1 | 27.9 | 40.3 | 39.2 | 1.12 | 35.888 | | |
| 400.0 | 400.0 | 400.0 | 400.0 | 0.8 | 0.8 | 136.27 | -29.1 | 27.9 | 40.3 | 38.8 | 1.57 | 25.634 | | |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | 136.27 | -29.1 | 27.9 | 40.3 | 38.3 | 2.02 | 19.938 | | |
| 600.0 | 600.0 | 600.0 | 600.0 | 1.2 | 1.2 | 136.27 | -29.1 | 27.9 | 40.3 | 37.9 | 2.47 | 16.313 | | |
| 700.0 | 700.0 | 700.0 | 700.0 | 1.5 | 1.5 | 136.27 | -29.1 | 27.9 | 40.3 | 37.4 | 2.92 | 13.803 | | |
| 800.0 | 800.0 | 800.0 | 800.0 | 1.7 | 1.7 | 136.27 | -29.1 | 27.9 | 40.3 | 37.0 | 3.37 | 11.963 | | |
| 900.0 | 900.0 | 900.0 | 900.0 | 1.9 | 1.9 | 136.27 | -29.1 | 27.9 | 40.3 | 36.5 | 3.82 | 10.555 | | |
| 1,000.0 | 1,000.0 | 1,000.0 | 1,000.0 | 2.1 | 2.1 | 136.27 | -29.1 | 27.9 | 40.3 | 36.1 | 4.27 | 9.444 | | |
| 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 | 2.4 | 2.4 | 136.27 | -29.1 | 27.9 | 40.3 | 35.6 | 4.72 | 8.545 | | |
| 1,200.0 | 1,200.0 | 1,200.0 | 1,200.0 | 2.6 | 2.6 | 136.27 | -29.1 | 27.9 | 40.3 | 35.2 | 5.17 | 7.802 CC, ES | | |
| 1,300.0 | 1,300.0 | 1,298.6 | 1,298.6 | 2.8 | 2.8 | 135.68 | -30.0 | 29.3 | 42.0 | 36.4 | 5.60 | 7.506 | | |
| 1,400.0 | 1,400.0 | 1,397.0 | 1,396.8 | 3.0 | 3.0 | 134.17 | -32.7 | 33.6 | 47.0 | 41.0 | 6.01 | 7.826 | | |
| 1,500.0 | 1,500.0 | 1,494.9 | 1,494.4 | 3.3 | 3.2 | 132.26 | -37.1 | 40.8 | 55.4 | 49.0 | 6.43 | 8.615 | | |
| 1,600.0 | 1,600.0 | 1,592.2 | 1,590.9 | 3.5 | 3.4 | 130.40 | -43.2 | 50.7 | 67.2 | 60.3 | 6.88 | 9.775 | | |
| 1,700.0 | 1,700.0 | 1,688.9 | 1,686.6 | 3.7 | 3.6 | 18.89 | -50.9 | 63.3 | 80.7 | 73.5 | 7.25 | 11.141 | | |
| 1,800.0 | 1,799.8 | 1,788.2 | 1,784.5 | 3.9 | 3.9 | 18.49 | -59.6 | 77.5 | 92.5 | 84.8 | 7.63 | 12.112 | | |
| 1,900.0 | 1,899.5 | 1,887.9 | 1,882.7 | 4.1 | 4.2 | 18.81 | -68.4 | 91.8 | 100.9 | 92.9 | 8.03 | 12.571 | | |
| 2,000.0 | 1,998.7 | 1,987.7 | 1,981.1 | 4.3 | 4.5 | 19.72 | -77.1 | 106.0 | 106.0 | 97.6 | 8.42 | 12.586 | | |
| 2,100.0 | 2,097.5 | 2,087.7 | 2,079.6 | 4.6 | 4.9 | 21.21 | -85.9 | 120.3 | 108.0 | 99.1 | 8.83 | 12.221 | | |
| 2,200.0 | 2,195.6 | 2,187.6 | 2,178.1 | 4.8 | 5.2 | 23.38 | -94.7 | 134.6 | 106.7 | 97.5 | 9.26 | 11.525 | | |
| 2,300.0 | 2,293.1 | 2,287.3 | 2,276.5 | 5.2 | 5.5 | 26.47 | -103.4 | 148.8 | 102.5 | 92.8 | 9.72 | 10.546 | | |
| 2,390.0 | 2,380.1 | 2,376.9 | 2,364.8 | 5.5 | 5.8 | 30.36 | -111.3 | 161.6 | 96.4 | 86.2 | 10.19 | 9.462 | | |
| 2,400.0 | 2,389.6 | 2,386.8 | 2,374.5 | 5.5 | 5.9 | 30.86 | -112.1 | 163.0 | 95.6 | 85.4 | 10.25 | 9.329 | | |
| 2,500.0 | 2,485.9 | 2,486.1 | 2,472.5 | 6.0 | 6.2 | 36.36 | -120.9 | 177.2 | 88.2 | 77.3 | 10.92 | 8.079 | | |
| 2,600.0 | 2,582.1 | 2,585.5 | 2,570.4 | 6.4 | 6.6 | 42.78 | -129.6 | 191.4 | 81.8 | 70.1 | 11.71 | 6.985 | | |
| 2,700.0 | 2,678.3 | 2,684.8 | 2,668.3 | 6.9 | 7.0 | 50.17 | -138.3 | 205.6 | 76.6 | 63.9 | 12.64 | 6.056 | | |
| 2,800.0 | 2,774.5 | 2,784.1 | 2,766.3 | 7.4 | 7.3 | 58.48 | -147.0 | 219.8 | 72.8 | 59.1 | 13.71 | 5.308 | | |
| 2,900.0 | 2,870.8 | 2,883.5 | 2,864.2 | 7.9 | 7.7 | 67.47 | -155.7 | 234.0 | 70.7 | 55.8 | 14.88 | 4.750 | | |
| 2,963.3 | 2,931.7 | 2,946.4 | 2,926.2 | 8.2 | 7.9 | 73.35 | -161.2 | 243.0 | 70.3 | 54.7 | 15.64 | 4.496 | | |
| 3,000.0 | 2,967.0 | 2,982.8 | 2,962.1 | 8.4 | 8.1 | 76.76 | -164.4 | 248.2 | 70.4 | 54.4 | 16.07 | 4.384 | | |
| 3,100.0 | 3,063.2 | 3,082.1 | 3,060.0 | 8.9 | 8.4 | 85.88 | -173.1 | 262.4 | 72.0 | 54.9 | 17.19 | 4.192 | | |
| 3,200.0 | 3,159.4 | 3,181.5 | 3,158.0 | 9.4 | 8.8 | 94.40 | -181.9 | 276.6 | 75.4 | 57.2 | 18.18 | 4.147 | | |
| 3,300.0 | 3,255.6 | 3,280.8 | 3,255.9 | 10.0 | 9.2 | 102.05 | -190.6 | 290.8 | 80.3 | 61.2 | 19.03 | 4.218 | | |
| 3,400.0 | 3,351.9 | 3,380.1 | 3,353.8 | 10.5 | 9.6 | 108.73 | -199.3 | 305.0 | 86.4 | 66.7 | 19.76 | 4.373 | | |
| 3,500.0 | 3,448.1 | 3,479.5 | 3,451.8 | 11.0 | 9.9 | 114.46 | -208.0 | 319.2 | 93.6 | 73.2 | 20.40 | 4.587 | | |
| 3,600.0 | 3,544.3 | 3,578.8 | 3,549.7 | 11.6 | 10.3 | 119.34 | -216.7 | 333.3 | 101.5 | 80.6 | 20.98 | 4.840 | | |
| 3,700.0 | 3,640.5 | 3,678.1 | 3,647.6 | 12.1 | 10.7 | 123.50 | -225.4 | 347.5 | 110.1 | 88.6 | 21.53 | 5.117 | | |
| 3,800.0 | 3,736.7 | 3,777.5 | 3,745.6 | 12.7 | 11.1 | 127.03 | -234.1 | 361.7 | 119.2 | 97.2 | 22.05 | 5.407 | | |
| 3,900.0 | 3,833.0 | 3,876.8 | 3,843.5 | 13.3 | 11.5 | 130.06 | -242.9 | 375.9 | 128.7 | 106.1 | 22.57 | 5.703 | | |
| 4,000.0 | 3,929.2 | 3,976.2 | 3,941.4 | 13.8 | 11.8 | 132.67 | -251.6 | 390.1 | 138.5 | 115.4 | 23.08 | 5.999 | | |
| 4,100.0 | 4,025.4 | 4,075.5 | 4,039.3 | 14.4 | 12.2 | 134.94 | -260.3 | 404.3 | 148.5 | 124.9 | 23.60 | 6.293 | | |
| 4,200.0 | 4,121.6 | 4,174.8 | 4,137.3 | 14.9 | 12.6 | 136.91 | -269.0 | 418.5 | 158.7 | 134.6 | 24.12 | 6.581 | | |
| 4,300.0 | 4,217.9 | 4,274.2 | 4,235.2 | 15.5 | 13.0 | 138.65 | -277.7 | 432.7 | 169.1 | 144.5 | 24.65 | 6.861 | | |
| 4,400.0 | 4,314.1 | 4,373.5 | 4,333.1 | 16.1 | 13.4 | 140.18 | -286.4 | 446.9 | 179.7 | 154.5 | 25.18 | 7.134 | | |
| 4,500.0 | 4,410.3 | 4,472.8 | 4,431.1 | 16.7 | 13.8 | 141.54 | -295.1 | 461.1 | 190.3 | 164.6 | 25.72 | 7.398 | | |
| 4,600.0 | 4,506.5 | 4,571.7 | 4,528.6 | 17.2 | 14.2 | 142.76 | -303.8 | 475.2 | 201.1 | 174.8 | 26.26 | 7.656 | | |
| 4,700.0 | 4,602.7 | 4,666.2 | 4,622.0 | 17.8 | 14.4 | 144.17 | -311.1 | 487.1 | 213.2 | 186.6 | 26.66 | 7.997 | | |
| 4,800.0 | 4,699.0 | 4,759.9 | 4,715.0 | 18.4 | 14.6 | 145.98 | -316.8 | 496.4 | 227.8 | 200.9 | 26.94 | 8.457 | | |
| 4,900.0 | 4,795.2 | 4,852.5 | 4,807.3 | 18.9 | 14.8 | 148.06 | -320.8 | 502.9 | 244.9 | 217.8 | 27.12 | 9.031 | | |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning |
| 4,925.7 | 4,819.9 | 4,876.1 | 4,830.9 | 19.1 | 14.9 | 148.62 | -321.6 | 504.2 | 249.8 | 222.6 | 27.16 | 9.197 | |
| 5,000.0 | 4,891.7 | 4,944.1 | 4,898.8 | 19.5 | 15.0 | 150.33 | -323.3 | 507.0 | 263.9 | 236.7 | 27.24 | 9.690 | |
| 5,100.0 | 4,989.0 | 5,035.1 | 4,989.8 | 19.8 | 15.2 | 152.42 | -324.2 | 508.5 | 282.8 | 255.5 | 27.30 | 10.357 | |
| 5,200.0 | 5,087.0 | 5,132.3 | 5,087.0 | 20.2 | 15.3 | 154.28 | -324.2 | 508.5 | 300.4 | 273.0 | 27.39 | 10.966 | |
| 5,300.0 | 5,185.7 | 5,231.0 | 5,185.7 | 20.5 | 15.4 | 155.68 | -324.2 | 508.5 | 315.1 | 287.5 | 27.54 | 11.443 | |
| 5,400.0 | 5,284.9 | 5,330.2 | 5,284.9 | 20.8 | 15.6 | 156.69 | -324.2 | 508.5 | 326.7 | 299.0 | 27.72 | 11.787 | |
| 5,500.0 | 5,384.4 | 5,429.8 | 5,384.4 | 21.0 | 15.7 | 157.38 | -324.2 | 508.5 | 335.3 | 307.4 | 27.93 | 12.004 | |
| 5,600.0 | 5,484.3 | 5,529.6 | 5,484.3 | 21.1 | 15.9 | 157.80 | -324.2 | 508.5 | 340.6 | 312.5 | 28.16 | 12.098 | |
| 5,700.0 | 5,584.2 | 5,629.6 | 5,584.2 | 21.3 | 16.0 | 157.96 | -324.2 | 508.5 | 342.8 | 314.4 | 28.39 | 12.072 | |
| 5,715.8 | 5,600.0 | 5,645.3 | 5,600.0 | 21.3 | 16.1 | -91.83 | -324.2 | 508.5 | 342.8 | 314.3 | 28.46 | 12.043 | |
| 5,800.0 | 5,684.2 | 5,729.6 | 5,684.2 | 21.4 | 16.2 | -91.83 | -324.2 | 508.5 | 342.8 | 314.0 | 28.75 | 11.923 | |
| 5,837.0 | 5,721.2 | 5,766.6 | 5,721.2 | 21.4 | 16.3 | -91.83 | -324.2 | 508.5 | 342.8 | 313.9 | 28.88 | 11.870 | |
| 5,850.0 | 5,734.2 | 5,779.6 | 5,734.2 | 21.4 | 16.3 | -92.04 | -324.2 | 508.5 | 342.8 | 313.9 | 28.90 | 11.863 | |
| 5,900.0 | 5,784.1 | 5,829.4 | 5,784.1 | 21.5 | 16.4 | -92.63 | -324.2 | 508.5 | 343.0 | 313.8 | 29.16 | 11.763 | |
| 5,950.0 | 5,833.4 | 5,878.7 | 5,833.4 | 21.5 | 16.4 | -93.96 | -324.2 | 508.5 | 343.4 | 313.9 | 29.51 | 11.637 | |
| 6,000.0 | 5,881.6 | 5,926.9 | 5,881.6 | 21.5 | 16.5 | -95.92 | -324.2 | 508.5 | 344.6 | 314.7 | 29.94 | 11.509 | |
| 6,050.0 | 5,928.4 | 5,977.1 | 5,931.7 | 21.5 | 16.6 | -98.46 | -323.3 | 508.5 | 346.8 | 316.4 | 30.40 | 11.408 | |
| 6,100.0 | 5,973.2 | 6,030.7 | 5,985.0 | 21.5 | 16.6 | -101.08 | -317.3 | 508.5 | 349.9 | 319.1 | 30.76 | 11.372 | |
| 6,150.0 | 6,015.7 | 6,086.6 | 6,039.5 | 21.5 | 16.7 | -103.63 | -305.3 | 508.6 | 353.5 | 322.6 | 30.96 | 11.418 | |
| 6,200.0 | 6,055.6 | 6,144.8 | 6,094.7 | 21.4 | 16.7 | -106.07 | -286.6 | 508.8 | 357.7 | 326.8 | 30.98 | 11.546 | |
| 6,250.0 | 6,092.3 | 6,205.7 | 6,149.7 | 21.4 | 16.7 | -108.37 | -260.6 | 508.9 | 362.3 | 331.5 | 30.83 | 11.751 | |
| 6,300.0 | 6,125.6 | 6,269.2 | 6,203.4 | 21.3 | 16.6 | -110.51 | -226.9 | 509.2 | 367.0 | 336.4 | 30.53 | 12.018 | |
| 6,350.0 | 6,155.2 | 6,335.4 | 6,254.7 | 21.3 | 16.6 | -112.45 | -185.1 | 509.5 | 371.5 | 341.4 | 30.14 | 12.326 | |
| 6,400.0 | 6,180.8 | 6,404.3 | 6,301.9 | 21.3 | 16.5 | -114.14 | -135.0 | 509.9 | 375.8 | 346.1 | 29.73 | 12.639 | |
| 6,450.0 | 6,202.2 | 6,475.6 | 6,343.4 | 21.2 | 16.5 | -115.55 | -77.1 | 510.3 | 379.5 | 350.1 | 29.40 | 12.908 | |
| 6,500.0 | 6,219.2 | 6,549.0 | 6,377.5 | 21.2 | 16.4 | -116.64 | -12.1 | 510.8 | 382.3 | 353.1 | 29.24 | 13.077 | |
| 6,518.8 | 6,224.4 | 6,577.1 | 6,388.0 | 21.2 | 16.4 | -116.97 | 14.0 | 510.9 | 383.2 | 353.9 | 29.25 | 13.101 | |
| 6,600.0 | 6,245.4 | 6,675.2 | 6,415.7 | 21.2 | 16.4 | -117.31 | 108.0 | 511.6 | 383.6 | 353.7 | 29.88 | 12.838 | |
| 6,618.8 | 6,250.3 | 6,694.0 | 6,420.6 | 21.2 | 16.4 | -117.32 | 126.2 | 511.8 | 383.6 | 353.5 | 30.04 | 12.769 | |
| 6,622.7 | 6,251.2 | 6,697.9 | 6,421.6 | 21.2 | 16.4 | -117.32 | 130.0 | 511.8 | 383.5 | 353.5 | 30.06 | 12.759 | |
| 6,650.0 | 6,257.4 | 6,725.2 | 6,428.7 | 21.2 | 16.5 | -117.42 | 156.3 | 512.0 | 383.9 | 353.6 | 30.29 | 12.673 | |
| 6,700.0 | 6,265.1 | 6,800.1 | 6,443.1 | 21.3 | 16.7 | -117.77 | 229.7 | 512.5 | 384.7 | 353.6 | 31.04 | 12.393 | |
| 6,750.0 | 6,268.0 | 6,872.0 | 6,447.0 | 21.4 | 17.2 | -117.76 | 301.5 | 513.0 | 384.3 | 352.2 | 32.08 | 11.979 | |
| 6,755.2 | 6,268.0 | 6,877.2 | 6,447.0 | 21.4 | 17.3 | -117.76 | 306.6 | 513.1 | 384.3 | 352.1 | 32.19 | 11.940 | |
| 6,800.0 | 6,268.0 | 6,922.0 | 6,447.0 | 21.6 | 17.6 | -117.77 | 351.5 | 513.4 | 384.1 | 351.2 | 32.96 | 11.654 | |
| 6,900.0 | 6,268.0 | 7,022.0 | 6,447.0 | 22.0 | 18.7 | -117.80 | 451.4 | 514.1 | 383.8 | 348.9 | 34.86 | 11.009 | |
| 7,000.0 | 6,268.0 | 7,122.0 | 6,447.0 | 22.7 | 19.8 | -117.83 | 551.4 | 514.9 | 383.4 | 346.4 | 36.99 | 10.367 | |
| 7,100.0 | 6,268.0 | 7,222.0 | 6,447.0 | 23.6 | 21.1 | -117.86 | 651.4 | 515.6 | 383.1 | 343.8 | 39.30 | 9.747 | |
| 7,200.0 | 6,268.0 | 7,322.0 | 6,447.0 | 24.7 | 22.5 | -117.89 | 751.4 | 516.3 | 382.7 | 340.9 | 41.77 | 9.162 | |
| 7,300.0 | 6,268.0 | 7,422.0 | 6,447.0 | 25.8 | 23.9 | -117.91 | 851.4 | 517.1 | 382.4 | 338.0 | 44.37 | 8.617 | |
| 7,400.0 | 6,268.0 | 7,522.0 | 6,447.0 | 27.1 | 25.4 | -117.94 | 951.4 | 517.8 | 382.0 | 334.9 | 47.09 | 8.113 | |
| 7,500.0 | 6,268.0 | 7,622.0 | 6,447.0 | 28.5 | 27.0 | -117.97 | 1,051.4 | 518.5 | 381.6 | 331.8 | 49.89 | 7.650 | |
| 7,600.0 | 6,268.0 | 7,722.0 | 6,447.0 | 30.0 | 28.5 | -118.00 | 1,151.4 | 519.3 | 381.3 | 328.5 | 52.77 | 7.226 | |
| 7,700.0 | 6,268.0 | 7,822.0 | 6,447.0 | 31.5 | 30.2 | -118.03 | 1,251.4 | 520.0 | 380.9 | 325.2 | 55.71 | 6.838 | |
| 7,800.0 | 6,268.0 | 7,922.0 | 6,447.0 | 33.1 | 31.8 | -118.06 | 1,351.4 | 520.7 | 380.6 | 321.9 | 58.71 | 6.483 | |
| 7,900.0 | 6,268.0 | 8,022.0 | 6,447.0 | 34.7 | 33.5 | -118.08 | 1,451.4 | 521.4 | 380.2 | 318.5 | 61.75 | 6.158 | |
| 8,000.0 | 6,268.0 | 8,122.0 | 6,447.0 | 36.3 | 35.2 | -118.11 | 1,551.4 | 522.2 | 379.9 | 315.0 | 64.83 | 5.860 | |
| 8,100.0 | 6,268.0 | 8,222.0 | 6,447.0 | 37.9 | 37.0 | -118.14 | 1,651.4 | 522.9 | 379.5 | 311.6 | 67.94 | 5.586 | |
| 8,200.0 | 6,268.0 | 8,322.0 | 6,447.0 | 39.6 | 38.7 | -118.17 | 1,751.4 | 523.6 | 379.2 | 308.1 | 71.09 | 5.334 | |
| 8,300.0 | 6,268.0 | 8,422.0 | 6,447.0 | 41.3 | 40.5 | -118.20 | 1,851.4 | 524.4 | 378.8 | 304.6 | 74.26 | 5.101 | |
| 8,400.0 | 6,268.0 | 8,522.0 | 6,447.0 | 43.0 | 42.3 | -118.23 | 1,951.4 | 525.1 | 378.5 | 301.0 | 77.45 | 4.887 | |
| 8,500.0 | 6,268.0 | 8,622.0 | 6,447.0 | 44.8 | 44.1 | -118.26 | 2,051.4 | 525.8 | 378.1 | 297.4 | 80.66 | 4.688 | |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| Offset Design | | | | | | | | | | | | | | Latham 34-2 Pad Sec. 2-T4N-R63W - Latham T34-P31-2HC - Wellbore #1 - Plan #1 (11-12-13) | | Offset Site Error: | | 0.0 ft | |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--|---|--|--------------------|--|--------|--|
| Survey Program: 0-MWD | | | | | | | | | | | | | | | | Offset Well Error: | | 0.0 ft | |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | Warning | | | | | |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | | | | | | | |
| 8,600.0 | 6,268.0 | 8,722.0 | 6,447.0 | 46.5 | 45.9 | -118.28 | 2,151.4 | 526.6 | 377.8 | 293.9 | 83.89 | 4.503 | | | | | | | |
| 8,700.0 | 6,268.0 | 8,822.0 | 6,447.0 | 48.3 | 47.7 | -118.31 | 2,251.4 | 527.3 | 377.4 | 290.3 | 87.13 | 4.332 | | | | | | | |
| 8,800.0 | 6,268.0 | 8,922.0 | 6,447.0 | 50.1 | 49.5 | -118.34 | 2,351.4 | 528.0 | 377.0 | 286.7 | 90.38 | 4.172 | | | | | | | |
| 8,900.0 | 6,268.0 | 9,022.0 | 6,447.0 | 51.9 | 51.3 | -118.37 | 2,451.4 | 528.7 | 376.7 | 283.0 | 93.65 | 4.022 | | | | | | | |
| 9,000.0 | 6,268.0 | 9,122.0 | 6,447.0 | 53.7 | 53.1 | -118.40 | 2,551.4 | 529.5 | 376.3 | 279.4 | 96.92 | 3.883 | | | | | | | |
| 9,100.0 | 6,268.0 | 9,222.0 | 6,447.0 | 55.5 | 55.0 | -118.43 | 2,651.4 | 530.2 | 376.0 | 275.8 | 100.21 | 3.752 | | | | | | | |
| 9,200.0 | 6,268.0 | 9,322.0 | 6,447.0 | 57.3 | 56.8 | -118.46 | 2,751.4 | 530.9 | 375.6 | 272.1 | 103.50 | 3.629 | | | | | | | |
| 9,300.0 | 6,268.0 | 9,422.0 | 6,447.0 | 59.1 | 58.6 | -118.49 | 2,851.4 | 531.7 | 375.3 | 268.5 | 106.80 | 3.514 | | | | | | | |
| 9,400.0 | 6,268.0 | 9,522.0 | 6,447.0 | 60.9 | 60.5 | -118.52 | 2,951.4 | 532.4 | 374.9 | 264.8 | 110.10 | 3.405 | | | | | | | |
| 9,500.0 | 6,268.0 | 9,622.0 | 6,447.0 | 62.7 | 62.4 | -118.55 | 3,051.4 | 533.1 | 374.6 | 261.2 | 113.41 | 3.303 | | | | | | | |
| 9,600.0 | 6,268.0 | 9,722.0 | 6,447.0 | 64.6 | 64.2 | -118.58 | 3,151.4 | 533.9 | 374.2 | 257.5 | 116.73 | 3.206 | | | | | | | |
| 9,700.0 | 6,268.0 | 9,822.0 | 6,447.0 | 66.4 | 66.1 | -118.61 | 3,251.4 | 534.6 | 373.9 | 253.8 | 120.05 | 3.114 | | | | | | | |
| 9,800.0 | 6,268.0 | 9,922.0 | 6,447.0 | 68.3 | 67.9 | -118.63 | 3,351.3 | 535.3 | 373.5 | 250.1 | 123.37 | 3.028 | | | | | | | |
| 9,900.0 | 6,268.0 | 10,022.0 | 6,447.0 | 70.1 | 69.8 | -118.66 | 3,451.3 | 536.1 | 373.2 | 246.5 | 126.70 | 2.945 | | | | | | | |
| 10,000.0 | 6,268.0 | 10,122.0 | 6,447.0 | 71.9 | 71.7 | -118.69 | 3,551.3 | 536.8 | 372.8 | 242.8 | 130.03 | 2.867 | | | | | | | |
| 10,100.0 | 6,268.0 | 10,222.0 | 6,447.0 | 73.8 | 73.5 | -118.72 | 3,651.3 | 537.5 | 372.5 | 239.1 | 133.36 | 2.793 | | | | | | | |
| 10,200.0 | 6,268.0 | 10,322.0 | 6,447.0 | 75.7 | 75.4 | -118.75 | 3,751.3 | 538.2 | 372.1 | 235.4 | 136.70 | 2.722 | | | | | | | |
| 10,300.0 | 6,268.0 | 10,422.0 | 6,447.0 | 77.5 | 77.3 | -118.78 | 3,851.3 | 539.0 | 371.8 | 231.7 | 140.04 | 2.655 | | | | | | | |
| 10,400.0 | 6,268.0 | 10,522.0 | 6,447.0 | 79.4 | 79.2 | -118.81 | 3,951.3 | 539.7 | 371.4 | 228.0 | 143.37 | 2.590 | | | | | | | |
| 10,500.0 | 6,268.0 | 10,622.0 | 6,447.0 | 81.2 | 81.1 | -118.84 | 4,051.3 | 540.4 | 371.1 | 224.3 | 146.71 | 2.529 | | | | | | | |
| 10,600.0 | 6,268.0 | 10,722.0 | 6,447.0 | 83.1 | 82.9 | -118.87 | 4,151.3 | 541.2 | 370.7 | 220.7 | 150.06 | 2.470 | | | | | | | |
| 10,700.0 | 6,268.0 | 10,822.0 | 6,447.0 | 85.0 | 84.8 | -118.90 | 4,251.3 | 541.9 | 370.4 | 217.0 | 153.40 | 2.414 | | | | | | | |
| 10,800.0 | 6,268.0 | 10,922.0 | 6,447.0 | 86.9 | 86.7 | -118.93 | 4,351.3 | 542.6 | 370.0 | 213.3 | 156.74 | 2.361 | | | | | | | |
| 10,900.0 | 6,268.0 | 11,022.0 | 6,447.0 | 88.7 | 88.6 | -118.96 | 4,451.3 | 543.4 | 369.7 | 209.6 | 160.09 | 2.309 | | | | | | | |
| 10,927.3 | 6,268.0 | 11,048.0 | 6,447.0 | 89.2 | 89.1 | -118.97 | 4,477.4 | 543.5 | 369.6 | 208.6 | 160.98 | 2.296 | | | | | | | |
| 10,932.1 | 6,268.0 | 11,048.0 | 6,447.0 | 89.3 | 89.1 | -118.97 | 4,477.4 | 543.5 | 369.6 | 208.5 | 161.06 | 2.295 SF | | | | | | | |

| | | | |
|---------------------------|---------------------------------|-------------------------------------|-----------------------------|
| Company: | BONANZA CREEK ENERGY OPERATING | Local Co-ordinate Reference: | Well Latham T-P-2HNB |
| Project: | SEC.2-T4N-R63W | TVD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Reference Site: | Latham 34-2 Pad Sec. 2-T4N-R63W | MD Reference: | WELL @ 4533.0ft (RKB - 13') |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Latham T-P-2HNB | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (11-12-13) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | | Offset Site Error: | 0.0ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 136.28 | -14.6 | 13.9 | 20.2 | | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 136.28 | -14.6 | 13.9 | 20.2 | 19.9 | 0.22 | 89.732 | | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 136.28 | -14.6 | 13.9 | 20.2 | 19.5 | 0.67 | 29.911 | | |
| 300.0 | 300.0 | 300.0 | 300.0 | 0.6 | 0.6 | 136.28 | -14.6 | 13.9 | 20.2 | 19.0 | 1.12 | 17.946 | | |
| 400.0 | 400.0 | 400.0 | 400.0 | 0.8 | 0.8 | 136.28 | -14.6 | 13.9 | 20.2 | 18.6 | 1.57 | 12.819 | | |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | 136.28 | -14.6 | 13.9 | 20.2 | 18.1 | 2.02 | 9.970 | | |
| 600.0 | 600.0 | 600.0 | 600.0 | 1.2 | 1.2 | 136.28 | -14.6 | 13.9 | 20.2 | 17.7 | 2.47 | 8.157 | | |
| 700.0 | 700.0 | 700.0 | 700.0 | 1.5 | 1.5 | 136.28 | -14.6 | 13.9 | 20.2 | 17.2 | 2.92 | 6.902 | | |
| 800.0 | 800.0 | 800.0 | 800.0 | 1.7 | 1.7 | 136.28 | -14.6 | 13.9 | 20.2 | 16.8 | 3.37 | 5.982 | | |
| 900.0 | 900.0 | 900.0 | 900.0 | 1.9 | 1.9 | 136.28 | -14.6 | 13.9 | 20.2 | 16.3 | 3.82 | 5.278 | | |
| 1,000.0 | 1,000.0 | 1,000.0 | 1,000.0 | 2.1 | 2.1 | 136.28 | -14.6 | 13.9 | 20.2 | 15.9 | 4.27 | 4.723 | | |
| 1,100.0 | 1,100.0 | 1,100.0 | 1,100.0 | 2.4 | 2.4 | 136.28 | -14.6 | 13.9 | 20.2 | 15.4 | 4.72 | 4.273 | | |
| 1,200.0 | 1,200.0 | 1,200.0 | 1,200.0 | 2.6 | 2.6 | 136.28 | -14.6 | 13.9 | 20.2 | 15.0 | 5.17 | 3.901 | | |
| 1,300.0 | 1,300.0 | 1,300.0 | 1,300.0 | 2.8 | 2.8 | 136.28 | -14.6 | 13.9 | 20.2 | 14.5 | 5.62 | 3.589 | | |
| 1,400.0 | 1,400.0 | 1,400.0 | 1,400.0 | 3.0 | 3.0 | 136.28 | -14.6 | 13.9 | 20.2 | 14.1 | 6.07 | 3.323 CC, ES | | |
| 1,500.0 | 1,500.0 | 1,499.4 | 1,499.4 | 3.3 | 3.2 | 133.82 | -15.0 | 15.6 | 21.7 | 15.2 | 6.50 | 3.331 | | |
| 1,600.0 | 1,600.0 | 1,598.5 | 1,598.3 | 3.5 | 3.4 | 128.17 | -16.2 | 20.6 | 26.3 | 19.4 | 6.92 | 3.797 | | |
| 1,700.0 | 1,700.0 | 1,697.3 | 1,696.8 | 3.7 | 3.6 | 12.63 | -18.2 | 28.9 | 32.6 | 25.3 | 7.32 | 4.460 | | |
| 1,800.0 | 1,799.8 | 1,795.9 | 1,794.6 | 3.9 | 3.9 | 8.51 | -21.0 | 40.5 | 39.1 | 31.4 | 7.70 | 5.075 | | |
| 1,900.0 | 1,899.5 | 1,894.2 | 1,891.8 | 4.1 | 4.1 | 5.11 | -24.7 | 55.3 | 45.5 | 37.4 | 8.07 | 5.637 | | |
| 2,000.0 | 1,998.7 | 1,992.4 | 1,988.1 | 4.3 | 4.4 | 2.16 | -29.0 | 73.2 | 52.0 | 43.5 | 8.45 | 6.151 | | |
| 2,100.0 | 2,097.5 | 2,090.2 | 2,083.6 | 4.6 | 4.7 | -0.50 | -34.2 | 94.3 | 58.5 | 49.7 | 8.83 | 6.622 | | |
| 2,200.0 | 2,195.6 | 2,187.9 | 2,178.0 | 4.8 | 5.1 | -2.94 | -40.1 | 118.5 | 65.0 | 55.8 | 9.22 | 7.053 | | |
| 2,300.0 | 2,293.1 | 2,285.3 | 2,271.3 | 5.2 | 5.5 | -5.23 | -46.7 | 145.8 | 71.6 | 61.9 | 9.61 | 7.445 | | |
| 2,390.0 | 2,380.1 | 2,372.8 | 2,354.2 | 5.5 | 6.0 | -7.18 | -53.3 | 172.9 | 77.5 | 67.5 | 9.98 | 7.765 | | |
| 2,400.0 | 2,389.6 | 2,382.6 | 2,363.4 | 5.5 | 6.0 | -7.39 | -54.1 | 176.0 | 78.2 | 68.1 | 10.03 | 7.794 | | |
| 2,500.0 | 2,485.9 | 2,482.3 | 2,457.4 | 6.0 | 6.6 | -9.37 | -62.0 | 208.6 | 85.1 | 74.5 | 10.54 | 8.074 | | |
| 2,600.0 | 2,582.1 | 2,582.0 | 2,551.3 | 6.4 | 7.2 | -11.05 | -70.0 | 241.1 | 92.1 | 81.0 | 11.07 | 8.319 | | |
| 2,700.0 | 2,678.3 | 2,681.7 | 2,645.3 | 6.9 | 7.8 | -12.50 | -77.9 | 273.6 | 99.1 | 87.5 | 11.62 | 8.529 | | |
| 2,800.0 | 2,774.5 | 2,781.5 | 2,739.2 | 7.4 | 8.4 | -13.75 | -85.8 | 306.1 | 106.3 | 94.1 | 12.20 | 8.709 | | |
| 2,900.0 | 2,870.8 | 2,881.2 | 2,833.1 | 7.9 | 9.1 | -14.84 | -93.8 | 338.6 | 113.4 | 100.6 | 12.80 | 8.861 | | |
| 3,000.0 | 2,967.0 | 2,980.9 | 2,927.1 | 8.4 | 9.7 | -15.80 | -101.7 | 371.1 | 120.6 | 107.2 | 13.42 | 8.990 | | |
| 3,100.0 | 3,063.2 | 3,080.6 | 3,021.0 | 8.9 | 10.4 | -16.66 | -109.6 | 403.6 | 127.9 | 113.8 | 14.05 | 9.098 | | |
| 3,200.0 | 3,159.4 | 3,180.3 | 3,115.0 | 9.4 | 11.1 | -17.42 | -117.5 | 436.1 | 135.1 | 120.4 | 14.71 | 9.190 | | |
| 3,300.0 | 3,255.6 | 3,280.1 | 3,208.9 | 10.0 | 11.7 | -18.10 | -125.5 | 468.6 | 142.4 | 127.0 | 15.37 | 9.266 | | |
| 3,400.0 | 3,351.9 | 3,379.8 | 3,302.8 | 10.5 | 12.4 | -18.72 | -133.4 | 501.1 | 149.7 | 133.7 | 16.05 | 9.329 | | |
| 3,500.0 | 3,448.1 | 3,479.5 | 3,396.8 | 11.0 | 13.1 | -19.28 | -141.3 | 533.6 | 157.0 | 140.3 | 16.74 | 9.383 | | |
| 3,600.0 | 3,544.3 | 3,579.2 | 3,490.7 | 11.6 | 13.8 | -19.79 | -149.3 | 566.1 | 164.4 | 146.9 | 17.44 | 9.427 | | |
| 3,700.0 | 3,640.5 | 3,679.0 | 3,584.7 | 12.1 | 14.5 | -20.26 | -157.2 | 598.6 | 171.7 | 153.6 | 18.14 | 9.463 | | |
| 3,800.0 | 3,736.7 | 3,778.7 | 3,678.6 | 12.7 | 15.2 | -20.69 | -165.1 | 631.1 | 179.0 | 160.2 | 18.86 | 9.493 | | |
| 3,900.0 | 3,833.0 | 3,878.4 | 3,772.5 | 13.3 | 15.9 | -21.08 | -173.0 | 663.6 | 186.4 | 166.8 | 19.59 | 9.518 | | |
| 4,000.0 | 3,929.2 | 3,978.1 | 3,866.5 | 13.8 | 16.6 | -21.45 | -181.0 | 696.1 | 193.8 | 173.5 | 20.32 | 9.538 | | |
| 4,100.0 | 4,025.4 | 4,077.8 | 3,960.4 | 14.4 | 17.3 | -21.78 | -188.9 | 728.7 | 201.2 | 180.1 | 21.06 | 9.554 | | |
| 4,200.0 | 4,121.6 | 4,177.6 | 4,054.4 | 14.9 | 18.0 | -22.10 | -196.8 | 761.2 | 208.5 | 186.7 | 21.80 | 9.566 | | |
| 4,300.0 | 4,217.9 | 4,277.3 | 4,148.3 | 15.5 | 18.7 | -22.39 | -204.8 | 793.7 | 215.9 | 193.4 | 22.55 | 9.576 | | |
| 4,400.0 | 4,314.1 | 4,377.0 | 4,242.2 | 16.1 | 19.4 | -22.66 | -212.7 | 826.2 | 223.3 | 200.0 | 23.30 | 9.584 | | |
| 4,500.0 | 4,410.3 | 4,476.7 | 4,336.2 | 16.7 | 20.1 | -22.92 | -220.6 | 858.7 | 230.7 | 206.7 | 24.06 | 9.590 | | |
| 4,600.0 | 4,506.5 | 4,576.4 | 4,430.1 | 17.2 | 20.8 | -23.16 | -228.5 | 891.2 | 238.1 | 213.3 | 24.82 | 9.594 | | |
| 4,700.0 | 4,602.7 | 4,676.2 | 4,524.1 | 17.8 | 21.5 | -23.39 | -236.5 | 923.7 | 245.5 | 219.9 | 25.58 | 9.596 | | |
| 4,800.0 | 4,699.0 | 4,775.9 | 4,618.0 | 18.4 | 22.2 | -23.60 | -244.4 | 956.2 | 252.9 | 226.6 | 26.35 | 9.598 | | |
| 4,900.0 | 4,795.2 | 4,875.6 | 4,711.9 | 18.9 | 22.9 | -23.80 | -252.3 | 988.7 | 260.3 | 233.2 | 27.13 | 9.598 | | |
| 4,925.7 | 4,819.9 | 4,901.3 | 4,736.1 | 19.1 | 23.1 | -23.85 | -254.4 | 997.1 | 262.2 | 234.9 | 27.32 | 9.598 | | |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| Latham 34-2 Pad Sec. 2-T4N-R63W - Latham T44-P41-2HC - Wellbore #1 - Plan #1 (11-12-13) | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|--------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | | |
| Measured Depth | Vertical Depth | Measured Depth | Vertical Depth | Reference | Offset | Highside Toolface | Offset Wellbore Centre | | Between Centres | Between Ellipses | Minimum Separation | Separation Factor | Warning | |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (°) | +N/-S (ft) | +E/-W (ft) | (ft) | (ft) | (ft) | | | |
| 5,000.0 | 4,891.7 | 4,975.3 | 4,805.8 | 19.5 | 23.6 | -23.96 | -260.2 | 1,021.2 | 268.6 | 240.8 | 27.87 | 9.639 | | |
| 5,100.0 | 4,989.0 | 5,081.2 | 4,905.9 | 19.8 | 24.3 | -23.90 | -268.5 | 1,054.9 | 279.2 | 250.8 | 28.48 | 9.804 | | |
| 5,200.0 | 5,087.0 | 5,191.1 | 5,010.9 | 20.2 | 24.9 | -23.77 | -276.1 | 1,086.3 | 289.6 | 260.6 | 29.00 | 9.988 | | |
| 5,300.0 | 5,185.7 | 5,301.4 | 5,117.5 | 20.5 | 25.3 | -23.60 | -282.8 | 1,113.8 | 299.5 | 270.1 | 29.43 | 10.176 | | |
| 5,400.0 | 5,284.9 | 5,412.2 | 5,225.6 | 20.8 | 25.8 | -23.38 | -288.6 | 1,137.4 | 309.0 | 279.2 | 29.80 | 10.368 | | |
| 5,500.0 | 5,384.4 | 5,523.4 | 5,335.0 | 21.0 | 26.1 | -23.13 | -293.4 | 1,157.0 | 317.9 | 287.8 | 30.09 | 10.564 | | |
| 5,600.0 | 5,484.3 | 5,635.1 | 5,445.5 | 21.1 | 26.4 | -22.83 | -297.2 | 1,172.6 | 326.3 | 296.0 | 30.31 | 10.765 | | |
| 5,700.0 | 5,584.2 | 5,747.2 | 5,557.0 | 21.3 | 26.7 | -22.50 | -299.9 | 1,183.9 | 334.2 | 303.8 | 30.46 | 10.971 | | |
| 5,715.8 | 5,600.0 | 5,764.9 | 5,574.6 | 21.3 | 26.7 | 87.77 | -300.3 | 1,185.3 | 335.4 | 304.9 | 30.53 | 10.985 | | |
| 5,800.0 | 5,684.2 | 5,859.7 | 5,669.3 | 21.4 | 26.9 | 88.04 | -301.7 | 1,191.0 | 340.5 | 309.7 | 30.76 | 11.069 | | |
| 5,837.0 | 5,721.2 | 5,901.5 | 5,711.0 | 21.4 | 26.9 | 88.11 | -302.0 | 1,192.6 | 341.8 | 311.0 | 30.87 | 11.073 | | |
| 5,850.0 | 5,734.2 | 5,916.2 | 5,725.7 | 21.4 | 27.0 | 87.94 | -302.1 | 1,193.0 | 342.2 | 311.3 | 30.86 | 11.087 | | |
| 5,900.0 | 5,784.1 | 5,972.5 | 5,782.0 | 21.5 | 27.0 | 88.59 | -302.4 | 1,193.9 | 342.9 | 312.0 | 30.85 | 11.114 | | |
| 5,949.3 | 5,832.6 | 6,023.1 | 5,832.6 | 21.5 | 27.1 | 90.00 | -302.4 | 1,193.9 | 342.8 | 312.2 | 30.60 | 11.203 | | |
| 5,950.0 | 5,833.4 | 6,023.8 | 5,833.4 | 21.5 | 27.1 | 90.03 | -302.4 | 1,193.9 | 342.8 | 312.2 | 30.59 | 11.205 | | |
| 6,000.0 | 5,881.6 | 6,072.1 | 5,881.6 | 21.5 | 27.1 | 92.11 | -302.4 | 1,193.9 | 343.1 | 312.9 | 30.18 | 11.367 | | |
| 6,050.0 | 5,928.4 | 6,120.7 | 5,930.2 | 21.5 | 27.2 | 94.72 | -301.5 | 1,193.9 | 344.1 | 314.4 | 29.68 | 11.592 | | |
| 6,100.0 | 5,973.2 | 6,171.6 | 5,980.8 | 21.5 | 27.2 | 97.40 | -296.1 | 1,193.9 | 346.0 | 316.8 | 29.22 | 11.841 | | |
| 6,150.0 | 6,015.7 | 6,224.4 | 6,032.5 | 21.5 | 27.2 | 100.04 | -285.3 | 1,193.9 | 348.7 | 319.9 | 28.81 | 12.104 | | |
| 6,200.0 | 6,055.6 | 6,279.4 | 6,084.8 | 21.4 | 27.2 | 102.62 | -268.6 | 1,193.9 | 352.1 | 323.7 | 28.43 | 12.385 | | |
| 6,250.0 | 6,092.3 | 6,336.7 | 6,137.2 | 21.4 | 27.2 | 105.11 | -245.4 | 1,193.9 | 356.1 | 328.0 | 28.07 | 12.686 | | |
| 6,300.0 | 6,125.6 | 6,396.5 | 6,188.8 | 21.3 | 27.2 | 107.48 | -215.2 | 1,193.8 | 360.5 | 332.7 | 27.71 | 13.008 | | |
| 6,350.0 | 6,155.2 | 6,459.0 | 6,238.6 | 21.3 | 27.2 | 109.69 | -177.5 | 1,193.8 | 365.1 | 337.7 | 27.35 | 13.348 | | |
| 6,400.0 | 6,180.8 | 6,524.1 | 6,285.3 | 21.3 | 27.1 | 111.72 | -132.2 | 1,193.7 | 369.7 | 342.7 | 26.99 | 13.694 | | |
| 6,450.0 | 6,202.2 | 6,592.0 | 6,327.6 | 21.2 | 27.1 | 113.52 | -79.3 | 1,193.6 | 374.0 | 347.3 | 26.66 | 14.027 | | |
| 6,500.0 | 6,219.2 | 6,662.3 | 6,363.8 | 21.2 | 27.0 | 115.05 | -19.0 | 1,193.6 | 377.9 | 351.5 | 26.41 | 14.309 | | |
| 6,518.8 | 6,224.4 | 6,689.4 | 6,375.6 | 21.2 | 27.0 | 115.55 | 5.5 | 1,193.5 | 379.2 | 352.8 | 26.34 | 14.396 | | |
| 6,600.0 | 6,245.4 | 6,797.3 | 6,409.8 | 21.2 | 27.0 | 116.48 | 107.6 | 1,193.4 | 380.8 | 353.8 | 27.00 | 14.103 | | |
| 6,618.8 | 6,250.3 | 6,816.1 | 6,414.6 | 21.2 | 27.0 | 116.48 | 125.8 | 1,193.4 | 380.8 | 353.6 | 27.21 | 13.993 | | |
| 6,623.5 | 6,251.4 | 6,820.8 | 6,415.9 | 21.2 | 27.0 | 116.49 | 130.3 | 1,193.4 | 380.8 | 353.5 | 27.21 | 13.992 | | |
| 6,650.0 | 6,257.4 | 6,847.3 | 6,422.7 | 21.2 | 27.0 | 116.59 | 155.9 | 1,193.3 | 381.1 | 353.8 | 27.26 | 13.978 | | |
| 6,700.0 | 6,265.1 | 6,909.4 | 6,437.5 | 21.3 | 27.1 | 117.19 | 216.2 | 1,193.2 | 382.9 | 355.5 | 27.43 | 13.959 | | |
| 6,750.0 | 6,268.0 | 6,985.1 | 6,446.5 | 21.4 | 27.2 | 117.70 | 291.3 | 1,193.1 | 384.1 | 356.3 | 27.78 | 13.828 | | |
| 6,755.2 | 6,268.0 | 6,993.0 | 6,446.8 | 21.4 | 27.2 | 117.73 | 299.2 | 1,193.1 | 384.2 | 356.3 | 27.82 | 13.807 | | |
| 6,800.0 | 6,268.0 | 7,043.3 | 6,447.0 | 21.6 | 27.3 | 117.78 | 349.4 | 1,193.1 | 384.0 | 355.5 | 28.51 | 13.470 | | |
| 6,900.0 | 6,268.0 | 7,143.3 | 6,447.0 | 22.0 | 27.6 | 117.81 | 449.4 | 1,192.9 | 383.6 | 353.4 | 30.19 | 12.705 | | |
| 7,000.0 | 6,268.0 | 7,243.3 | 6,447.0 | 22.7 | 28.0 | 117.85 | 549.4 | 1,192.8 | 383.2 | 351.1 | 32.16 | 11.916 | | |
| 7,100.0 | 6,268.0 | 7,343.3 | 6,447.0 | 23.6 | 28.5 | 117.88 | 649.4 | 1,192.6 | 382.8 | 348.4 | 34.36 | 11.142 | | |
| 7,200.0 | 6,268.0 | 7,443.3 | 6,447.0 | 24.7 | 29.2 | 117.91 | 749.4 | 1,192.5 | 382.4 | 345.6 | 36.75 | 10.405 | | |
| 7,300.0 | 6,268.0 | 7,543.3 | 6,447.0 | 25.8 | 30.1 | 117.94 | 849.4 | 1,192.4 | 382.0 | 342.7 | 39.30 | 9.720 | | |
| 7,400.0 | 6,268.0 | 7,643.3 | 6,447.0 | 27.1 | 31.0 | 117.98 | 949.4 | 1,192.2 | 381.6 | 339.6 | 41.98 | 9.090 | | |
| 7,500.0 | 6,268.0 | 7,743.3 | 6,447.0 | 28.5 | 32.1 | 118.01 | 1,049.4 | 1,192.1 | 381.2 | 336.4 | 44.76 | 8.516 | | |
| 7,600.0 | 6,268.0 | 7,843.3 | 6,447.0 | 30.0 | 33.3 | 118.04 | 1,149.4 | 1,192.0 | 380.8 | 333.1 | 47.63 | 7.995 | | |
| 7,700.0 | 6,268.0 | 7,943.3 | 6,447.0 | 31.5 | 34.6 | 118.08 | 1,249.4 | 1,191.8 | 380.3 | 329.8 | 50.56 | 7.522 | | |
| 7,800.0 | 6,268.0 | 8,043.3 | 6,447.0 | 33.1 | 36.0 | 118.11 | 1,349.4 | 1,191.7 | 379.9 | 326.4 | 53.56 | 7.094 | | |
| 7,900.0 | 6,268.0 | 8,143.3 | 6,447.0 | 34.7 | 37.4 | 118.14 | 1,449.4 | 1,191.6 | 379.5 | 322.9 | 56.61 | 6.705 | | |
| 8,000.0 | 6,268.0 | 8,243.3 | 6,447.0 | 36.3 | 38.9 | 118.17 | 1,549.4 | 1,191.4 | 379.1 | 319.4 | 59.69 | 6.351 | | |
| 8,100.0 | 6,268.0 | 8,343.3 | 6,447.0 | 37.9 | 40.4 | 118.21 | 1,649.4 | 1,191.3 | 378.7 | 315.9 | 62.82 | 6.029 | | |
| 8,200.0 | 6,268.0 | 8,443.3 | 6,447.0 | 39.6 | 42.0 | 118.24 | 1,749.4 | 1,191.1 | 378.3 | 312.3 | 65.97 | 5.734 | | |
| 8,300.0 | 6,268.0 | 8,543.3 | 6,447.0 | 41.3 | 43.6 | 118.27 | 1,849.4 | 1,191.0 | 377.9 | 308.7 | 69.15 | 5.465 | | |
| 8,400.0 | 6,268.0 | 8,643.3 | 6,447.0 | 43.0 | 45.2 | 118.31 | 1,949.4 | 1,190.9 | 377.5 | 305.1 | 72.35 | 5.218 | | |
| 8,500.0 | 6,268.0 | 8,743.2 | 6,447.0 | 44.8 | 46.9 | 118.34 | 2,049.4 | 1,190.7 | 377.1 | 301.5 | 75.56 | 4.990 | | |

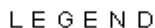
| Latham 34-2 Pad Sec. 2-T4N-R63W - Latham T44-P41-2HC - Wellbore #1 - Plan #1 (11-12-13) | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------------|---------|-----------------|------------------|---------|--------------------|-------------------|
| Survey Program: 0-MWD | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | Warning | | |
| Measured Depth | Vertical Depth | Measured Depth | Vertical Depth | Reference | Offset | Highside Toolface | Offset Wellbore Centre +N/-S | +E/-W | Between Centres | Between Ellipses | | Minimum Separation | Separation Factor |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (°) | (ft) | (ft) | (ft) | (ft) | | (ft) | |
| 8,600.0 | 6,268.0 | 8,843.2 | 6,447.0 | 46.5 | 48.5 | 118.38 | 2,149.4 | 1,190.6 | 376.7 | 297.9 | 78.80 | 4.780 | |
| 8,700.0 | 6,268.0 | 8,943.2 | 6,447.0 | 48.3 | 50.2 | 118.41 | 2,249.4 | 1,190.5 | 376.2 | 294.2 | 82.05 | 4.586 | |
| 8,800.0 | 6,268.0 | 9,043.2 | 6,447.0 | 50.1 | 51.9 | 118.44 | 2,349.4 | 1,190.3 | 375.8 | 290.5 | 85.31 | 4.406 | |
| 8,900.0 | 6,268.0 | 9,143.2 | 6,447.0 | 51.9 | 53.7 | 118.48 | 2,449.4 | 1,190.2 | 375.4 | 286.8 | 88.58 | 4.238 | |
| 9,000.0 | 6,268.0 | 9,243.2 | 6,447.0 | 53.7 | 55.4 | 118.51 | 2,549.4 | 1,190.1 | 375.0 | 283.2 | 91.86 | 4.083 | |
| 9,100.0 | 6,268.0 | 9,343.2 | 6,447.0 | 55.5 | 57.2 | 118.54 | 2,649.4 | 1,189.9 | 374.6 | 279.5 | 95.15 | 3.937 | |
| 9,200.0 | 6,268.0 | 9,443.2 | 6,447.0 | 57.3 | 58.9 | 118.58 | 2,749.4 | 1,189.8 | 374.2 | 275.8 | 98.44 | 3.801 | |
| 9,300.0 | 6,268.0 | 9,543.2 | 6,447.0 | 59.1 | 60.7 | 118.61 | 2,849.4 | 1,189.7 | 373.8 | 272.0 | 101.74 | 3.674 | |
| 9,400.0 | 6,268.0 | 9,643.2 | 6,447.0 | 60.9 | 62.5 | 118.65 | 2,949.4 | 1,189.5 | 373.4 | 268.3 | 105.05 | 3.554 | |
| 9,500.0 | 6,268.0 | 9,743.2 | 6,447.0 | 62.7 | 64.3 | 118.68 | 3,049.4 | 1,189.4 | 373.0 | 264.6 | 108.36 | 3.442 | |
| 9,600.0 | 6,268.0 | 9,843.2 | 6,447.0 | 64.6 | 66.1 | 118.71 | 3,149.4 | 1,189.2 | 372.6 | 260.9 | 111.68 | 3.336 | |
| 9,700.0 | 6,268.0 | 9,943.2 | 6,447.0 | 66.4 | 67.9 | 118.75 | 3,249.4 | 1,189.1 | 372.2 | 257.2 | 115.00 | 3.236 | |
| 9,800.0 | 6,268.0 | 10,043.2 | 6,447.0 | 68.3 | 69.7 | 118.78 | 3,349.4 | 1,189.0 | 371.8 | 253.4 | 118.32 | 3.142 | |
| 9,900.0 | 6,268.0 | 10,143.2 | 6,447.0 | 70.1 | 71.5 | 118.82 | 3,449.4 | 1,188.8 | 371.3 | 249.7 | 121.65 | 3.053 | |
| 10,000.0 | 6,268.0 | 10,243.2 | 6,447.0 | 71.9 | 73.3 | 118.85 | 3,549.4 | 1,188.7 | 370.9 | 246.0 | 124.97 | 2.968 | |
| 10,100.0 | 6,268.0 | 10,343.2 | 6,447.0 | 73.8 | 75.1 | 118.89 | 3,649.4 | 1,188.6 | 370.5 | 242.2 | 128.30 | 2.888 | |
| 10,200.0 | 6,268.0 | 10,443.2 | 6,447.0 | 75.7 | 77.0 | 118.92 | 3,749.4 | 1,188.4 | 370.1 | 238.5 | 131.64 | 2.812 | |
| 10,300.0 | 6,268.0 | 10,543.2 | 6,447.0 | 77.5 | 78.8 | 118.96 | 3,849.4 | 1,188.3 | 369.7 | 234.7 | 134.97 | 2.739 | |
| 10,400.0 | 6,268.0 | 10,643.2 | 6,447.0 | 79.4 | 80.6 | 118.99 | 3,949.4 | 1,188.2 | 369.3 | 231.0 | 138.30 | 2.670 | |
| 10,500.0 | 6,268.0 | 10,743.2 | 6,447.0 | 81.2 | 82.5 | 119.03 | 4,049.4 | 1,188.0 | 368.9 | 227.3 | 141.64 | 2.605 | |
| 10,600.0 | 6,268.0 | 10,843.2 | 6,447.0 | 83.1 | 84.3 | 119.06 | 4,149.4 | 1,187.9 | 368.5 | 223.5 | 144.97 | 2.542 | |
| 10,700.0 | 6,268.0 | 10,943.2 | 6,447.0 | 85.0 | 86.2 | 119.10 | 4,249.4 | 1,187.7 | 368.1 | 219.8 | 148.31 | 2.482 | |
| 10,800.0 | 6,268.0 | 11,043.2 | 6,447.0 | 86.9 | 88.0 | 119.13 | 4,349.4 | 1,187.6 | 367.7 | 216.0 | 151.64 | 2.425 | |
| 10,900.0 | 6,268.0 | 11,143.2 | 6,447.0 | 88.7 | 89.9 | 119.17 | 4,449.4 | 1,187.5 | 367.3 | 212.3 | 154.98 | 2.370 | |
| 10,932.1 | 6,268.0 | 11,175.3 | 6,447.0 | 89.3 | 90.5 | 119.18 | 4,481.5 | 1,187.4 | 367.1 | 211.1 | 156.05 | 2.353 SF | |

| | |
|--|--|
| Reference Depths are relative to WELL @ 4533.0ft (RKB - 13') | Coordinates are relative to: Latham T-P-2HNB |
| Offset Depths are relative to Offset Datum | Coordinate System is US State Plane 1983, Colorado Northern Zone |
| Central Meridian is -105.500000 ° | Grid Convergence at Surface is: 0.71° |



Reference Depths are relative to WELL @ 4533.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Latham T-P-2HNB
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.71°



K31-2HC, Wellbore #1, Plan #1 (11-12-13) V0 Latham O-K-2HNB (Exist.), Wellbore #1, Wellbore #1 V0 Latham 44-41-2HNB (Exist.), Wellbore #1, Plan #1 (11-12-13) V0