BONANZA CREEK ENERGY OPERATING

Well Name: **Latham T34-P31-2HC**

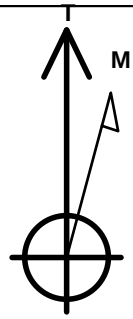
Surface Location: Latham 34-2 Pad Sec. 2-T4N-R63W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4520.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	1366854.59	3305642.71	40.335230	-104.403600	

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

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 324'FSL & 2191'FEL	1.0	0.0	0.0	Point
BHL 470'FNL & 1613'FEL	6447.0	4506.5	515.7	Point
T1 531'FSL & 1703'FEL	6447.0	225.9	485.1	Point



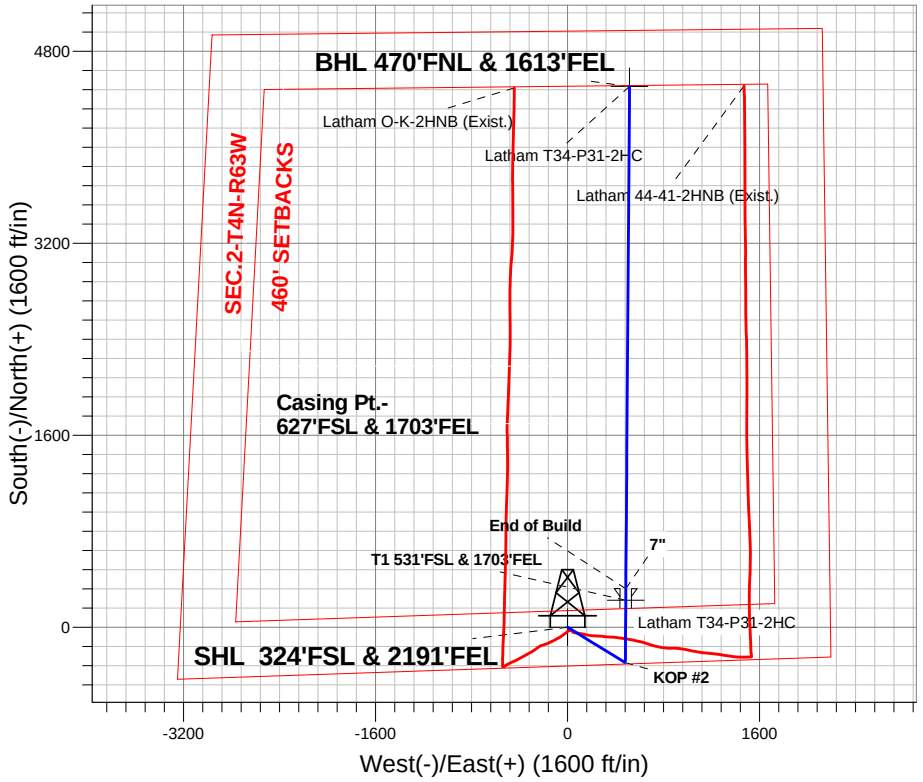
Azimuths to True North
Magnetic North: 8.34°

Magnetic Field
Strength: 52887.9snT
Dip Angle: 66.97°
Date: 10/28/2013
Model: IGRF2010

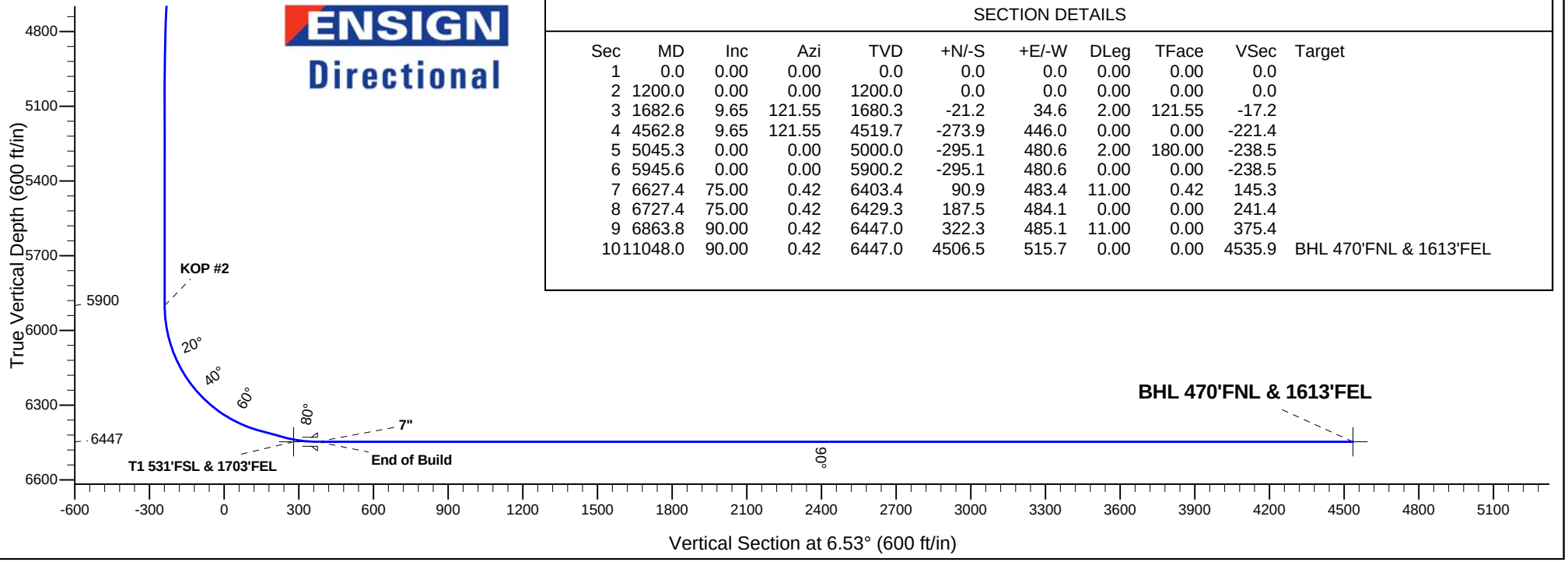
Latham 34-2 Pad Sec. 2-T4N-R63W
Latham T34-P31-2HC
Plan #1 (11-12-13)
14:50, November 13 2013

ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	KOP #1
5900.3	5945.6	KOP #2
6447.0	6863.8	End of Build



ENSIGN Directional



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1682.6	9.65	121.55	1680.3	-21.2	34.6	2.00	121.55	-17.2	
4	4562.8	9.65	121.55	4519.7	-273.9	446.0	0.00	0.00	-221.4	
5	5045.3	0.00	0.00	5000.0	-295.1	480.6	2.00	180.00	-238.5	
6	5945.6	0.00	0.00	5900.2	-295.1	480.6	0.00	0.00	-238.5	
7	6627.4	75.00	0.42	6403.4	90.9	483.4	11.00	0.42	145.3	
8	6727.4	75.00	0.42	6429.3	187.5	484.1	0.00	0.00	241.4	
9	6863.8	90.00	0.42	6447.0	322.3	485.1	11.00	0.00	375.4	
10	11048.0	90.00	0.42	6447.0	4506.5	515.7	0.00	0.00	4535.9	BHL 470'FNL & 1613'FEL

BONANZA CREEK ENERGY OPERATING

SEC.2-T4N-R63W
Latham 34-2 Pad Sec. 2-T4N-R63W
Latham T34-P31-2HC

Wellbore #1

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

Standard Planning Report

13 November, 2013

Database:	Landmark	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 T34-P31-2HC

Well Position	**+N/-S**	25.5 ft	**Northing:**	1,366,854.59 ft	**Latitude:**	40.335230
	+E/-W	-30.7 ft	**Easting:**	3,305,642.71 ft	**Longitude:**	-104.403600
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	10/28/2013	8.34	66.97	52,888

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	6.53

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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,682.6	9.65	121.55	1,680.3	-21.2	34.6	2.00	2.00	0.00	121.55	
4,562.8	9.65	121.55	4,519.7	-273.9	446.0	0.00	0.00	0.00	0.00	
5,045.3	0.00	0.00	5,000.0	-295.1	480.6	2.00	-2.00	0.00	180.00	
5,945.6	0.00	0.00	5,900.2	-295.1	480.6	0.00	0.00	0.00	0.00	
6,627.4	75.00	0.42	6,403.4	90.9	483.4	11.00	11.00	0.00	0.42	
6,727.4	75.00	0.42	6,429.3	187.5	484.1	0.00	0.00	0.00	0.00	
6,863.8	90.00	0.42	6,447.0	322.3	485.1	11.00	11.00	0.00	0.00	
11,048.0	90.00	0.42	6,447.0	4,506.5	515.7	0.00	0.00	0.00	0.00	BHL 470'FNL & 161

Database:	Landmark	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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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 T34-P31-2HC	**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 324'FSL & 2191'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
KOP #1									
1,300.0	2.00	121.55	1,300.0	-0.9	1.5	-0.7	2.00	2.00	0.00
1,400.0	4.00	121.55	1,399.8	-3.7	5.9	-3.0	2.00	2.00	0.00
1,500.0	6.00	121.55	1,499.5	-8.2	13.4	-6.6	2.00	2.00	0.00
1,600.0	8.00	121.55	1,598.7	-14.6	23.8	-11.8	2.00	2.00	0.00
1,682.6	9.65	121.55	1,680.3	-21.2	34.6	-17.2	2.00	2.00	0.00
1,700.0	9.65	121.55	1,697.5	-22.7	37.0	-18.4	0.00	0.00	0.00
1,800.0	9.65	121.55	1,796.1	-31.5	51.3	-25.5	0.00	0.00	0.00
1,900.0	9.65	121.55	1,894.6	-40.3	65.6	-32.6	0.00	0.00	0.00
2,000.0	9.65	121.55	1,993.2	-49.1	79.9	-39.7	0.00	0.00	0.00
2,100.0	9.65	121.55	2,091.8	-57.8	94.2	-46.8	0.00	0.00	0.00
2,200.0	9.65	121.55	2,190.4	-66.6	108.5	-53.8	0.00	0.00	0.00
2,300.0	9.65	121.55	2,289.0	-75.4	122.8	-60.9	0.00	0.00	0.00
2,400.0	9.65	121.55	2,387.6	-84.2	137.1	-68.0	0.00	0.00	0.00
2,500.0	9.65	121.55	2,486.2	-92.9	151.3	-75.1	0.00	0.00	0.00
2,600.0	9.65	121.55	2,584.7	-101.7	165.6	-82.2	0.00	0.00	0.00
2,700.0	9.65	121.55	2,683.3	-110.5	179.9	-89.3	0.00	0.00	0.00
2,800.0	9.65	121.55	2,781.9	-119.2	194.2	-96.4	0.00	0.00	0.00
2,900.0	9.65	121.55	2,880.5	-128.0	208.5	-103.5	0.00	0.00	0.00
3,000.0	9.65	121.55	2,979.1	-136.8	222.8	-110.6	0.00	0.00	0.00
3,100.0	9.65	121.55	3,077.7	-145.6	237.1	-117.7	0.00	0.00	0.00
3,200.0	9.65	121.55	3,176.2	-154.3	251.3	-124.8	0.00	0.00	0.00
3,300.0	9.65	121.55	3,274.8	-163.1	265.6	-131.9	0.00	0.00	0.00
3,400.0	9.65	121.55	3,373.4	-171.9	279.9	-138.9	0.00	0.00	0.00
3,500.0	9.65	121.55	3,472.0	-180.7	294.2	-146.0	0.00	0.00	0.00
3,600.0	9.65	121.55	3,570.6	-189.4	308.5	-153.1	0.00	0.00	0.00
3,700.0	9.65	121.55	3,669.2	-198.2	322.8	-160.2	0.00	0.00	0.00
3,800.0	9.65	121.55	3,767.8	-207.0	337.1	-167.3	0.00	0.00	0.00
3,900.0	9.65	121.55	3,866.3	-215.7	351.4	-174.4	0.00	0.00	0.00
4,000.0	9.65	121.55	3,964.9	-224.5	365.6	-181.5	0.00	0.00	0.00
4,100.0	9.65	121.55	4,063.5	-233.3	379.9	-188.6	0.00	0.00	0.00
4,200.0	9.65	121.55	4,162.1	-242.1	394.2	-195.7	0.00	0.00	0.00
4,300.0	9.65	121.55	4,260.7	-250.8	408.5	-202.8	0.00	0.00	0.00
4,400.0	9.65	121.55	4,359.3	-259.6	422.8	-209.9	0.00	0.00	0.00
4,500.0	9.65	121.55	4,457.8	-268.4	437.1	-216.9	0.00	0.00	0.00
4,562.8	9.65	121.55	4,519.7	-273.9	446.0	-221.4	0.00	0.00	0.00
4,600.0	8.91	121.55	4,556.5	-277.0	451.2	-223.9	2.00	-2.00	0.00
4,700.0	6.91	121.55	4,655.5	-284.2	462.9	-229.8	2.00	-2.00	0.00
4,800.0	4.91	121.55	4,755.0	-289.6	471.7	-234.1	2.00	-2.00	0.00

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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 T34-P31-2HC	**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)
4,900.0	2.91	121.55	4,854.7	-293.2	477.5	-237.0	2.00	-2.00	0.00
5,000.0	0.91	121.55	4,954.7	-294.9	480.3	-238.4	2.00	-2.00	0.00
5,045.3	0.00	0.00	5,000.0	-295.1	480.6	-238.5	2.00	-2.00	0.00
5,100.0	0.00	0.00	5,054.7	-295.1	480.6	-238.5	0.00	0.00	0.00
5,200.0	0.00	0.00	5,154.7	-295.1	480.6	-238.5	0.00	0.00	0.00
5,300.0	0.00	0.00	5,254.7	-295.1	480.6	-238.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,354.7	-295.1	480.6	-238.5	0.00	0.00	0.00
5,500.0	0.00	0.00	5,454.7	-295.1	480.6	-238.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,554.7	-295.1	480.6	-238.5	0.00	0.00	0.00
5,700.0	0.00	0.00	5,654.7	-295.1	480.6	-238.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,754.7	-295.1	480.6	-238.5	0.00	0.00	0.00
5,900.0	0.00	0.00	5,854.7	-295.1	480.6	-238.5	0.00	0.00	0.00
5,945.6	0.00	0.00	5,900.3	-295.1	480.6	-238.5	0.00	0.00	0.00
KOP #2									
6,000.0	5.99	0.42	5,954.6	-292.3	480.6	-235.7	11.01	11.01	0.00
6,100.0	16.99	0.42	6,052.4	-272.4	480.8	-216.0	11.00	11.00	0.00
6,200.0	27.99	0.42	6,144.7	-234.2	481.0	-178.0	11.00	11.00	0.00
6,300.0	38.99	0.42	6,228.0	-179.1	481.4	-123.2	11.00	11.00	0.00
6,400.0	49.99	0.42	6,299.2	-109.1	482.0	-53.6	11.00	11.00	0.00
6,500.0	60.99	0.42	6,355.8	-26.9	482.6	28.2	11.00	11.00	0.00
6,600.0	71.99	0.42	6,395.6	64.7	483.2	119.2	11.00	11.00	0.00
6,627.4	75.00	0.42	6,403.4	90.9	483.4	145.3	11.00	11.00	0.00
6,700.0	75.00	0.42	6,422.2	161.1	483.9	215.1	0.00	0.00	0.00
6,727.4	75.00	0.42	6,429.3	187.5	484.1	241.4	0.00	0.00	0.00
6,768.5	79.52	0.42	6,438.3	227.6	484.4	281.2	11.00	11.00	0.00
T1 531'FSL & 1703'FEL									
6,800.0	82.99	0.42	6,443.1	258.8	484.6	312.2	11.00	11.00	0.00
6,863.8	90.00	0.42	6,447.0	322.4	485.1	375.5	10.99	10.99	0.00
End of Build - 7"									
6,900.0	90.00	0.42	6,447.0	358.6	485.4	411.4	0.00	0.00	0.00
7,000.0	90.00	0.42	6,447.0	458.6	486.1	510.9	0.00	0.00	0.00
7,100.0	90.00	0.42	6,447.0	558.6	486.8	610.3	0.00	0.00	0.00
7,200.0	90.00	0.42	6,447.0	658.6	487.6	709.7	0.00	0.00	0.00
7,300.0	90.00	0.42	6,447.0	758.6	488.3	809.2	0.00	0.00	0.00
7,400.0	90.00	0.42	6,447.0	858.6	489.0	908.6	0.00	0.00	0.00
7,500.0	90.00	0.42	6,447.0	958.6	489.8	1,008.0	0.00	0.00	0.00
7,600.0	90.00	0.42	6,447.0	1,058.6	490.5	1,107.5	0.00	0.00	0.00
7,700.0	90.00	0.42	6,447.0	1,158.6	491.2	1,206.9	0.00	0.00	0.00
7,800.0	90.00	0.42	6,447.0	1,258.6	491.9	1,306.3	0.00	0.00	0.00
7,900.0	90.00	0.42	6,447.0	1,358.6	492.7	1,405.8	0.00	0.00	0.00
8,000.0	90.00	0.42	6,447.0	1,458.6	493.4	1,505.2	0.00	0.00	0.00
8,100.0	90.00	0.42	6,447.0	1,558.6	494.1	1,604.6	0.00	0.00	0.00
8,200.0	90.00	0.42	6,447.0	1,658.6	494.9	1,704.1	0.00	0.00	0.00
8,300.0	90.00	0.42	6,447.0	1,758.6	495.6	1,803.5	0.00	0.00	0.00
8,400.0	90.00	0.42	6,447.0	1,858.6	496.3	1,902.9	0.00	0.00	0.00
8,500.0	90.00	0.42	6,447.0	1,958.6	497.1	2,002.4	0.00	0.00	0.00
8,600.0	90.00	0.42	6,447.0	2,058.5	497.8	2,101.8	0.00	0.00	0.00
8,700.0	90.00	0.42	6,447.0	2,158.5	498.5	2,201.2	0.00	0.00	0.00
8,800.0	90.00	0.42	6,447.0	2,258.5	499.2	2,300.7	0.00	0.00	0.00
8,900.0	90.00	0.42	6,447.0	2,358.5	500.0	2,400.1	0.00	0.00	0.00
9,000.0	90.00	0.42	6,447.0	2,458.5	500.7	2,499.5	0.00	0.00	0.00
9,100.0	90.00	0.42	6,447.0	2,558.5	501.4	2,599.0	0.00	0.00	0.00
9,200.0	90.00	0.42	6,447.0	2,658.5	502.2	2,698.4	0.00	0.00	0.00

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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 T34-P31-2HC	**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	0.42	6,447.0	2,758.5	502.9	2,797.8	0.00	0.00	0.00
9,400.0	90.00	0.42	6,447.0	2,858.5	503.6	2,897.2	0.00	0.00	0.00
9,500.0	90.00	0.42	6,447.0	2,958.5	504.4	2,996.7	0.00	0.00	0.00
9,600.0	90.00	0.42	6,447.0	3,058.5	505.1	3,096.1	0.00	0.00	0.00
9,700.0	90.00	0.42	6,447.0	3,158.5	505.8	3,195.5	0.00	0.00	0.00
9,800.0	90.00	0.42	6,447.0	3,258.5	506.6	3,295.0	0.00	0.00	0.00
9,900.0	90.00	0.42	6,447.0	3,358.5	507.3	3,394.4	0.00	0.00	0.00
10,000.0	90.00	0.42	6,447.0	3,458.5	508.0	3,493.8	0.00	0.00	0.00
10,100.0	90.00	0.42	6,447.0	3,558.5	508.7	3,593.3	0.00	0.00	0.00
10,200.0	90.00	0.42	6,447.0	3,658.5	509.5	3,692.7	0.00	0.00	0.00
10,300.0	90.00	0.42	6,447.0	3,758.5	510.2	3,792.1	0.00	0.00	0.00
10,400.0	90.00	0.42	6,447.0	3,858.5	510.9	3,891.6	0.00	0.00	0.00
10,500.0	90.00	0.42	6,447.0	3,958.5	511.7	3,991.0	0.00	0.00	0.00
10,600.0	90.00	0.42	6,447.0	4,058.5	512.4	4,090.4	0.00	0.00	0.00
10,700.0	90.00	0.42	6,447.0	4,158.5	513.1	4,189.9	0.00	0.00	0.00
10,800.0	90.00	0.42	6,447.0	4,258.5	513.9	4,289.3	0.00	0.00	0.00
10,900.0	90.00	0.42	6,447.0	4,358.5	514.6	4,388.7	0.00	0.00	0.00
11,000.0	90.00	0.42	6,447.0	4,458.5	515.3	4,488.2	0.00	0.00	0.00
11,048.0	90.00	0.42	6,447.0	4,506.5	515.7	4,535.9	0.00	0.00	0.00
BHL 470'FNL & 1613'FEL									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
BHL 470'FNL & 1613'	0.00	0.00	6,447.0	4,506.5	515.7	1,371,366.93	3,306,102.59	40.347600	-104.401750
- plan hits target center									
- Point									
T1 531'FSL & 1703'FE	0.00	0.00	6,447.0	225.9	485.1	1,367,086.44	3,306,124.94	40.335850	-104.401860
- plan misses target center by 8.9ft at 6768.5ft MD (6438.3 TVD, 227.6 N, 484.4 E)									
- Point									
SHL 324'FSL & 2191	0.00	0.00	1.0	0.0	0.0	1,366,854.59	3,305,642.71	40.335230	-104.403600
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,863.8	6,447.0	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
1,200.0	1,200.0	0.0	0.0	KOP #1
5,945.6	5,900.3	-295.1	480.6	KOP #2
6,863.8	6,447.0	322.4	485.1	End of Build

ENSIGN
Directional

BONANZA CREEK ENERGY OPERATING

SEC.2-T4N-R63W
Latham 34-2 Pad Sec. 2-T4N-R63W
Latham T34-P31-2HC

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

Anticollision Report

13 November, 2013

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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	11,048.0	Plan #1 (11-12-13) (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Latham 34-2 Pad Sec. 2-T4N-R63W						
Latham 34-31-2HNB - Wellbore #1 - Plan #1 (11-12-13)	1,200.0	1,200.0	62.5	57.3	12.082	CC, ES
Latham 34-31-2HNB - Wellbore #1 - Plan #1 (11-12-13)	11,048.0	10,859.7	369.6	212.0	2.346	SF
Latham 44-41-2HNB (Exist.) - Wellbore #1 - Wellbore #1	129.0	129.0	57.2	56.8	153.937	CC, ES
Latham 44-41-2HNB (Exist.) - Wellbore #1 - Wellbore #1	11,048.0	10,983.0	972.6	800.7	5.656	SF
Latham O34-K31-2HC - Wellbore #1 - Plan #1 (11-12-13	414.1	414.3	15.8	14.2	9.766	CC, ES
Latham O34-K31-2HC - Wellbore #1 - Plan #1 (11-12-13	11,048.0	11,042.3	643.9	466.1	3.621	SF
Latham O-K-2HNB (Exist.) - Wellbore #1 - Wellbore #1	1,063.7	1,064.0	26.7	22.3	6.100	CC, ES
Latham O-K-2HNB (Exist.) - Wellbore #1 - Wellbore #1	11,048.0	10,917.0	974.8	806.1	5.780	SF
Latham T44-P41-2HC - Wellbore #1 - Plan #1 (11-12-13)	1,200.0	1,200.0	20.2	15.0	3.900	CC, ES
Latham T44-P41-2HC - Wellbore #1 - Plan #1 (11-12-13)	11,048.0	11,172.1	643.9	466.0	3.620	SF
Latham T-P-2HNB - Wellbore #1 - Plan #1 (11-12-13)	1,200.0	1,200.0	40.3	35.2	7.802	CC, ES
Latham T-P-2HNB - Wellbore #1 - Plan #1 (11-12-13)	11,048.0	10,927.4	369.6	208.5	2.295	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

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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	-45.58	43.7	-44.6	62.5				
100.0	100.0	100.0	100.0	0.1	0.1	-45.58	43.7	-44.6	62.5	62.2	0.22	277.876	
200.0	200.0	200.0	200.0	0.3	0.3	-45.58	43.7	-44.6	62.5	61.8	0.67	92.625	
300.0	300.0	300.0	300.0	0.6	0.6	-45.58	43.7	-44.6	62.5	61.3	1.12	55.575	
400.0	400.0	400.0	400.0	0.8	0.8	-45.58	43.7	-44.6	62.5	60.9	1.57	39.697	
500.0	500.0	500.0	500.0	1.0	1.0	-45.58	43.7	-44.6	62.5	60.4	2.02	30.875	
600.0	600.0	600.0	600.0	1.2	1.2	-45.58	43.7	-44.6	62.5	60.0	2.47	25.261	
700.0	700.0	700.0	700.0	1.5	1.5	-45.58	43.7	-44.6	62.5	59.5	2.92	21.375	
800.0	800.0	800.0	800.0	1.7	1.7	-45.58	43.7	-44.6	62.5	59.1	3.37	18.525	
900.0	900.0	900.0	900.0	1.9	1.9	-45.58	43.7	-44.6	62.5	58.6	3.82	16.346	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-45.58	43.7	-44.6	62.5	58.2	4.27	14.625	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-45.58	43.7	-44.6	62.5	57.7	4.72	13.232	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-45.58	43.7	-44.6	62.5	57.3	5.17	12.082	CC, ES
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-167.47	43.7	-44.6	64.2	58.6	5.60	11.465	
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	-168.39	43.7	-44.6	69.3	63.3	6.00	11.544	
1,500.0	1,499.5	1,499.5	1,499.5	3.2	3.3	-169.65	43.7	-44.6	77.8	71.4	6.41	12.151	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
1,600.0	1,598.7	1,598.7	1,598.7	3.4	3.5	-171.01	43.7	-44.6	89.9	83.0	6.81	13.199	
1,682.6	1,680.3	1,680.3	1,680.3	3.6	3.7	-172.08	43.7	-44.6	102.4	95.2	7.14	14.346	
1,700.0	1,697.5	1,697.5	1,697.5	3.7	3.7	-172.30	43.7	-44.6	105.3	98.1	7.21	14.600	
1,800.0	1,796.1	1,796.1	1,796.1	3.9	3.9	-173.35	43.7	-44.6	121.9	114.3	7.64	15.959	
1,900.0	1,894.6	1,894.6	1,894.6	4.2	4.1	-174.16	43.7	-44.6	138.6	130.5	8.07	17.167	
2,000.0	1,993.2	1,993.2	1,993.2	4.6	4.4	-174.79	43.7	-44.6	155.3	146.8	8.51	18.246	
2,100.0	2,091.8	2,097.0	2,097.0	4.9	4.6	-175.56	42.3	-43.8	170.6	161.7	8.93	19.094	
2,200.0	2,190.4	2,202.0	2,201.8	5.2	4.8	-176.76	37.4	-41.3	182.7	173.4	9.34	19.573	
2,300.0	2,289.0	2,307.5	2,306.9	5.6	5.0	-178.37	29.1	-37.0	191.7	182.0	9.75	19.669	
2,400.0	2,387.6	2,413.4	2,411.9	5.9	5.2	179.60	17.3	-30.8	197.7	187.5	10.17	19.433	
2,500.0	2,486.2	2,514.4	2,511.8	6.3	5.4	177.38	3.8	-23.8	201.7	191.1	10.61	19.013	
2,600.0	2,584.7	2,614.1	2,610.3	6.6	5.6	175.26	-9.7	-16.8	205.9	194.8	11.06	18.619	
2,700.0	2,683.3	2,713.7	2,708.8	7.0	5.9	173.22	-23.1	-9.7	210.3	198.8	11.52	18.253	
2,800.0	2,781.9	2,813.3	2,807.2	7.4	6.1	171.27	-36.6	-2.7	215.1	203.1	12.01	17.908	
2,900.0	2,880.5	2,912.9	2,905.7	7.7	6.4	169.41	-50.0	4.3	220.0	207.5	12.51	17.583	
3,000.0	2,979.1	3,012.6	3,004.2	8.1	6.7	167.63	-63.5	11.3	225.2	212.2	13.04	17.277	
3,100.0	3,077.7	3,112.2	3,102.6	8.5	7.0	165.94	-76.9	18.3	230.6	217.0	13.57	16.988	
3,200.0	3,176.2	3,211.8	3,201.1	8.9	7.3	164.32	-90.4	25.3	236.2	222.1	14.13	16.715	
3,300.0	3,274.8	3,311.4	3,299.5	9.3	7.6	162.77	-103.8	32.4	242.0	227.3	14.70	16.458	
3,400.0	3,373.4	3,411.1	3,398.0	9.6	7.9	161.30	-117.3	39.4	247.9	232.6	15.29	16.214	
3,500.0	3,472.0	3,510.7	3,496.5	10.0	8.2	159.90	-130.7	46.4	254.0	238.1	15.89	15.985	
3,600.0	3,570.6	3,610.3	3,594.9	10.4	8.5	158.57	-144.1	53.4	260.2	243.7	16.50	15.768	
3,700.0	3,669.2	3,709.9	3,693.4	10.8	8.8	157.30	-157.6	60.4	266.6	249.5	17.13	15.564	
3,800.0	3,767.8	3,809.6	3,791.9	11.2	9.2	156.08	-171.0	67.4	273.1	255.3	17.76	15.373	
3,900.0	3,866.3	3,909.2	3,890.3	11.6	9.5	154.93	-184.5	74.5	279.7	261.3	18.41	15.192	
4,000.0	3,964.9	4,008.8	3,988.8	11.9	9.8	153.83	-197.9	81.5	286.4	267.3	19.07	15.022	
4,100.0	4,063.5	4,108.4	4,087.3	12.3	10.2	152.77	-211.4	88.5	293.2	273.5	19.73	14.862	
4,200.0	4,162.1	4,208.1	4,185.7	12.7	10.5	151.77	-224.8	95.5	300.1	279.7	20.40	14.712	
4,300.0	4,260.7	4,307.7	4,284.2	13.1	10.8	150.81	-238.3	102.5	307.1	286.1	21.08	14.570	
4,400.0	4,359.3	4,407.3	4,382.7	13.5	11.2	149.90	-251.7	109.5	314.2	292.5	21.77	14.437	
4,500.0	4,457.8	4,506.9	4,481.1	13.9	11.5	149.02	-265.2	116.6	321.4	298.9	22.46	14.312	
4,562.8	4,519.7	4,569.5	4,542.9	14.1	11.8	148.49	-273.6	121.0	325.9	303.0	22.89	14.237	
4,600.0	4,556.5	4,605.8	4,578.8	14.2	11.9	148.20	-278.5	123.5	328.4	305.3	23.14	14.193	
4,700.0	4,655.5	4,700.0	4,672.2	14.5	12.1	147.56	-289.4	129.2	334.2	310.5	23.69	14.106	
4,800.0	4,755.0	4,795.4	4,767.1	14.7	12.4	147.08	-297.7	133.5	338.5	314.3	24.17	14.002	
4,900.0	4,854.7	4,890.4	4,861.9	14.9	12.6	146.78	-303.1	136.4	341.3	316.7	24.59	13.883	
5,000.0	4,954.7	4,985.4	4,956.9	15.1	12.7	146.63	-305.8	137.7	342.7	317.8	24.93	13.746	
5,045.3	5,000.0	5,028.5	5,000.0	15.2	12.8	-91.84	-306.1	137.9	342.9	317.8	25.11	13.653	
5,100.0	5,054.7	5,083.2	5,054.7	15.2	12.9	-91.84	-306.1	137.9	342.9	317.6	25.30	13.551	
5,200.0	5,154.7	5,183.2	5,154.7	15.4	13.1	-91.84	-306.1	137.9	342.9	317.2	25.64	13.370	
5,300.0	5,254.7	5,283.2	5,254.7	15.5	13.2	-91.84	-306.1	137.9	342.9	316.9	25.99	13.193	
5,400.0	5,354.7	5,383.2	5,354.7	15.7	13.4	-91.84	-306.1	137.9	342.9	316.5	26.34	13.018	
5,500.0	5,454.7	5,483.2	5,454.7	15.8	13.6	-91.84	-306.1	137.9	342.9	316.2	26.69	12.846	
5,600.0	5,554.7	5,583.2	5,554.7	16.0	13.8	-91.84	-306.1	137.9	342.9	315.8	27.05	12.678	
5,700.0	5,654.7	5,683.2	5,654.7	16.2	13.9	-91.84	-306.1	137.9	342.9	315.5	27.40	12.513	
5,800.0	5,754.7	5,784.1	5,755.6	16.3	14.1	-91.65	-305.0	137.9	342.8	315.1	27.74	12.360	
5,890.1	5,844.8	5,874.5	5,844.8	16.5	14.2	-89.35	-291.2	138.1	342.6	314.8	27.78	12.332	
5,900.0	5,854.7	5,884.0	5,854.1	16.5	14.2	-88.96	-288.9	138.1	342.6	314.8	27.76	12.338	
5,945.6	5,900.2	5,926.8	5,895.0	16.5	14.2	-86.85	-276.3	138.2	342.9	315.3	27.67	12.392	
5,950.0	5,904.7	5,930.9	5,898.8	16.5	14.2	-87.04	-274.9	138.2	343.0	315.4	27.63	12.415	
6,000.0	5,954.6	5,975.9	5,940.4	16.6	14.2	-84.44	-257.8	138.4	344.2	316.7	27.47	12.531	
6,050.0	6,004.0	6,019.8	5,979.4	16.7	14.1	-81.93	-237.6	138.7	346.1	318.8	27.29	12.684	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
6,100.0	6,052.4	6,062.7	6,015.7	16.7	14.1	-79.52	-214.9	138.9	348.6	321.5	27.09	12.868	
6,150.0	6,099.5	6,104.7	6,049.3	16.7	14.1	-77.22	-189.8	139.2	351.5	324.7	26.88	13.077	
6,200.0	6,144.7	6,145.8	6,080.3	16.7	14.0	-75.06	-162.6	139.5	354.8	328.2	26.67	13.304	
6,250.0	6,187.6	6,186.4	6,108.5	16.7	14.0	-73.05	-133.6	139.8	358.4	331.9	26.46	13.544	
6,300.0	6,228.0	6,226.2	6,134.0	16.6	13.9	-71.20	-102.9	140.2	362.1	335.8	26.25	13.792	
6,350.0	6,265.2	6,265.6	6,156.8	16.6	13.9	-69.51	-70.9	140.6	365.7	339.7	26.05	14.040	
6,400.0	6,299.2	6,300.0	6,174.7	16.5	13.9	-68.11	-41.5	140.9	369.3	343.5	25.86	14.279	
6,450.0	6,329.4	6,343.0	6,194.3	16.5	13.9	-66.65	-3.2	141.3	372.6	346.9	25.70	14.498	
6,500.0	6,355.8	6,381.2	6,209.0	16.4	13.9	-65.48	32.0	141.7	375.7	350.1	25.60	14.679	
6,550.0	6,377.9	6,419.1	6,221.0	16.4	13.9	-64.49	67.9	142.1	378.5	352.9	25.55	14.814	
6,600.0	6,395.6	6,464.9	6,233.0	16.4	14.1	-63.70	112.1	142.6	380.4	354.8	25.63	14.840	
6,627.4	6,403.4	6,492.2	6,240.1	16.4	14.2	-63.57	138.6	142.9	380.6	354.8	25.76	14.773	
6,672.1	6,414.9	6,535.6	6,251.3	16.4	14.4	-63.56	180.5	143.4	380.5	354.3	26.20	14.523	
6,700.0	6,422.2	6,556.7	6,256.2	16.4	14.5	-63.47	200.9	143.6	380.7	354.3	26.47	14.385	
6,727.4	6,429.3	6,577.3	6,260.1	16.5	14.7	-63.28	221.1	143.9	381.5	354.7	26.73	14.272	
6,750.0	6,434.6	6,600.0	6,263.6	16.5	14.8	-62.95	243.6	144.1	382.3	355.4	26.88	14.223	
6,800.0	6,443.1	6,631.5	6,266.7	16.7	15.1	-62.55	275.0	144.5	383.5	356.3	27.21	14.093	
6,850.0	6,446.8	6,669.0	6,268.0	17.0	15.4	-62.27	312.4	144.9	384.3	356.6	27.68	13.884	
6,863.8	6,447.0	6,682.8	6,268.0	17.1	15.5	-62.24	326.2	145.0	384.3	356.5	27.86	13.796	
6,900.0	6,447.0	6,719.0	6,268.0	17.4	15.9	-62.23	362.4	145.5	384.2	355.7	28.45	13.505	
7,000.0	6,447.0	6,819.0	6,268.0	18.4	16.9	-62.20	462.4	146.6	383.8	353.6	30.26	12.685	
7,100.0	6,447.0	6,919.0	6,268.0	19.5	18.1	-62.17	562.4	147.7	383.5	351.1	32.34	11.859	
7,200.0	6,447.0	7,019.0	6,268.0	20.8	19.4	-62.15	662.4	148.9	383.1	348.5	34.63	11.062	
7,300.0	6,447.0	7,119.0	6,268.0	22.1	20.8	-62.12	762.4	150.0	382.8	345.7	37.11	10.314	
7,400.0	6,447.0	7,219.0	6,268.0	23.6	22.2	-62.09	862.4	151.1	382.4	342.7	39.73	9.625	
7,500.0	6,447.0	7,319.0	6,268.0	25.1	23.8	-62.06	962.4	152.3	382.1	339.6	42.47	8.996	
7,600.0	6,447.0	7,419.0	6,268.0	26.6	25.3	-62.03	1,062.4	153.4	381.7	336.4	45.30	8.425	
7,700.0	6,447.0	7,519.0	6,268.0	28.2	27.0	-62.00	1,162.4	154.5	381.3	333.1	48.22	7.909	
7,800.0	6,447.0	7,619.0	6,268.0	29.8	28.6	-61.98	1,262.4	155.6	381.0	329.8	51.19	7.442	
7,900.0	6,447.0	7,719.0	6,268.0	31.5	30.3	-61.95	1,362.4	156.8	380.6	326.4	54.23	7.019	
8,000.0	6,447.0	7,819.0	6,268.0	33.2	32.0	-61.92	1,462.4	157.9	380.3	323.0	57.30	6.636	
8,100.0	6,447.0	7,919.0	6,268.0	34.9	33.8	-61.89	1,562.4	159.0	379.9	319.5	60.42	6.288	
8,200.0	6,447.0	8,019.0	6,268.0	36.6	35.5	-61.86	1,662.3	160.2	379.6	316.0	63.57	5.971	
8,300.0	6,447.0	8,119.0	6,268.0	38.3	37.3	-61.83	1,762.3	161.3	379.2	312.5	66.74	5.682	
8,400.0	6,447.0	8,219.0	6,268.0	40.1	39.1	-61.81	1,862.3	162.4	378.9	308.9	69.94	5.417	
8,500.0	6,447.0	8,319.0	6,268.0	41.9	40.9	-61.78	1,962.3	163.6	378.5	305.4	73.16	5.174	
8,600.0	6,447.0	8,419.0	6,268.0	43.7	42.7	-61.75	2,062.3	164.7	378.2	301.8	76.39	4.950	
8,700.0	6,447.0	8,519.0	6,268.0	45.5	44.5	-61.72	2,162.3	165.8	377.8	298.2	79.64	4.744	
8,800.0	6,447.0	8,619.0	6,268.0	47.3	46.3	-61.69	2,262.3	167.0	377.5	294.5	82.90	4.553	
8,900.0	6,447.0	8,719.0	6,268.0	49.1	48.1	-61.66	2,362.3	168.1	377.1	290.9	86.18	4.376	
9,000.0	6,447.0	8,819.0	6,268.0	50.9	50.0	-61.63	2,462.3	169.2	376.7	287.3	89.46	4.211	
9,100.0	6,447.0	8,919.0	6,268.0	52.7	51.8	-61.60	2,562.3	170.4	376.4	283.6	92.75	4.058	
9,200.0	6,447.0	9,019.0	6,268.0	54.6	53.7	-61.57	2,662.3	171.5	376.0	280.0	96.06	3.915	
9,300.0	6,447.0	9,119.0	6,268.0	56.4	55.5	-61.55	2,762.3	172.6	375.7	276.3	99.36	3.781	
9,400.0	6,447.0	9,219.0	6,268.0	58.2	57.4	-61.52	2,862.3	173.8	375.3	272.7	102.68	3.656	
9,500.0	6,447.0	9,319.0	6,268.0	60.1	59.2	-61.49	2,962.3	174.9	375.0	269.0	105.99	3.538	
9,600.0	6,447.0	9,419.0	6,268.0	61.9	61.1	-61.46	3,062.2	176.0	374.6	265.3	109.32	3.427	
9,700.0	6,447.0	9,519.0	6,268.0	63.8	63.0	-61.43	3,162.2	177.1	374.3	261.6	112.64	3.323	
9,800.0	6,447.0	9,619.0	6,268.0	65.7	64.8	-61.40	3,262.2	178.3	373.9	257.9	115.97	3.224	
9,900.0	6,447.0	9,719.0	6,268.0	67.5	66.7	-61.37	3,362.2	179.4	373.6	254.3	119.31	3.131	
10,000.0	6,447.0	9,819.0	6,268.0	69.4	68.6	-61.34	3,462.2	180.5	373.2	250.6	122.64	3.043	
10,100.0	6,447.0	9,919.0	6,268.0	71.3	70.5	-61.31	3,562.2	181.7	372.9	246.9	125.98	2.960	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
10,200.0	6,447.0	10,019.0	6,268.0	73.1	72.3	-61.28	3,662.2	182.8	372.5	243.2	129.32	2.881	
10,300.0	6,447.0	10,119.0	6,268.0	75.0	74.2	-61.25	3,762.2	183.9	372.2	239.5	132.66	2.805	
10,400.0	6,447.0	10,219.0	6,268.0	76.9	76.1	-61.22	3,862.2	185.1	371.8	235.8	136.01	2.734	
10,500.0	6,447.0	10,319.0	6,268.0	78.8	78.0	-61.19	3,962.2	186.2	371.5	232.1	139.35	2.666	
10,600.0	6,447.0	10,419.0	6,268.0	80.6	79.9	-61.16	4,062.2	187.3	371.1	228.4	142.70	2.601	
10,700.0	6,447.0	10,519.0	6,268.0	82.5	81.8	-61.13	4,162.2	188.5	370.8	224.7	146.04	2.539	
10,800.0	6,447.0	10,619.0	6,268.0	84.4	83.7	-61.10	4,262.2	189.6	370.4	221.0	149.39	2.479	
10,900.0	6,447.0	10,719.0	6,268.0	86.3	85.5	-61.07	4,362.2	190.7	370.0	217.3	152.74	2.423	
11,000.0	6,447.0	10,819.0	6,268.0	88.2	87.4	-61.04	4,462.1	191.9	369.7	213.6	156.08	2.369	
11,038.9	6,447.0	10,857.9	6,268.0	88.9	88.2	-61.03	4,501.0	192.3	369.6	212.2	157.39	2.348	
11,048.0	6,447.0	10,859.7	6,268.0	89.1	88.2	-61.03	4,502.9	192.3	369.6	212.0	157.57	2.346	SF

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 44-41-2HNB (Exist.) - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 ft

Survey Program: 77-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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	133.78	-40.1	41.8	57.9				
100.0	100.0	100.4	100.4	0.1	0.1	134.21	-39.9	41.0	57.2	57.0	0.25	231.322	
129.0	129.0	129.0	129.0	0.2	0.2	134.34	-39.9	40.9	57.2	56.8	0.37	153.937	CC, ES
200.0	200.0	199.1	199.1	0.3	0.3	134.35	-40.3	41.3	57.7	57.0	0.68	85.261	
300.0	300.0	297.9	297.8	0.6	0.6	133.11	-41.1	44.0	60.2	59.1	1.11	54.081	
400.0	400.0	396.4	396.2	0.8	0.8	130.78	-42.4	49.1	65.0	63.4	1.57	41.482	
500.0	500.0	494.1	493.6	1.0	1.0	127.88	-44.2	56.9	72.3	70.3	2.04	35.425	
600.0	600.0	591.2	590.0	1.2	1.3	124.68	-46.7	67.5	82.7	80.2	2.54	32.556	
700.0	700.0	687.3	685.1	1.5	1.6	120.99	-49.1	81.7	96.5	93.4	3.06	31.492	
800.0	800.0	783.5	779.8	1.7	2.0	117.63	-51.7	98.7	113.2	109.6	3.63	31.187	
900.0	900.0	877.6	871.8	1.9	2.4	115.10	-55.0	117.5	132.8	128.5	4.23	31.367	
1,000.0	1,000.0	969.8	961.4	2.1	2.8	113.11	-59.2	138.7	155.7	150.8	4.87	32.002	
1,100.0	1,100.0	1,060.4	1,048.6	2.4	3.3	111.24	-63.3	163.0	182.3	176.7	5.53	32.972	
1,200.0	1,200.0	1,150.5	1,134.6	2.6	3.8	109.64	-67.7	189.7	211.8	205.6	6.23	33.977	
1,300.0	1,300.0	1,242.1	1,221.3	2.8	4.4	-13.47	-71.3	219.2	241.9	236.2	5.78	41.858	
1,400.0	1,399.8	1,335.7	1,309.2	3.0	5.0	-15.41	-73.0	251.0	270.3	264.1	6.22	43.443	
1,500.0	1,499.5	1,434.3	1,401.9	3.2	5.6	-17.17	-75.1	284.6	295.9	289.2	6.68	44.296	
1,600.0	1,598.7	1,539.9	1,502.1	3.4	6.2	-18.66	-78.4	318.1	316.3	309.1	7.15	44.235	
1,682.6	1,680.3	1,623.6	1,581.8	3.6	6.7	-19.86	-80.9	343.4	329.6	322.1	7.53	43.774	
1,700.0	1,697.5	1,641.3	1,598.6	3.7	6.8	-20.14	-81.3	348.7	332.1	324.5	7.61	43.624	
1,800.0	1,796.1	1,744.4	1,697.2	3.9	7.3	-21.78	-83.3	378.8	346.0	337.9	8.11	42.675	
1,900.0	1,894.6	1,842.3	1,791.0	4.2	7.9	-23.20	-85.2	406.7	359.3	350.7	8.61	41.748	
2,000.0	1,993.2	1,938.2	1,882.8	4.6	8.5	-24.26	-88.7	434.5	373.5	364.4	9.12	40.949	
2,100.0	2,091.8	2,034.0	1,974.2	4.9	9.0	-25.00	-93.8	462.9	388.6	379.0	9.65	40.256	
2,200.0	2,190.4	2,131.7	2,067.2	5.2	9.6	-25.72	-98.9	492.2	404.3	394.1	10.20	39.629	
2,300.0	2,289.0	2,227.0	2,157.8	5.6	10.2	-26.45	-103.3	521.2	420.4	409.7	10.76	39.089	
2,400.0	2,387.6	2,320.8	2,246.8	5.9	10.8	-26.98	-108.9	550.6	437.6	426.3	11.32	38.663	
2,500.0	2,486.2	2,413.5	2,334.2	6.3	11.5	-27.38	-114.9	580.7	455.9	444.0	11.89	38.346	
2,600.0	2,584.7	2,504.7	2,419.8	6.6	12.1	-27.67	-121.6	611.3	475.6	463.2	12.47	38.144	
2,700.0	2,683.3	2,597.4	2,506.4	7.0	12.8	-27.78	-129.8	643.6	496.6	483.6	13.06	38.028	
2,800.0	2,781.9	2,693.5	2,595.6	7.4	13.5	-27.57	-141.1	677.5	518.4	504.7	13.65	37.980	
2,900.0	2,880.5	2,791.0	2,686.3	7.7	14.2	-27.46	-151.9	711.5	539.7	525.5	14.24	37.894	
3,000.0	2,979.1	2,880.8	2,769.8	8.1	14.9	-27.52	-160.2	743.6	561.8	546.9	14.82	37.900	
3,100.0	3,077.7	2,968.7	2,850.8	8.5	15.6	-27.73	-167.0	776.7	585.8	570.4	15.41	38.013	
3,200.0	3,176.2	3,061.6	2,936.3	8.9	16.3	-28.17	-171.7	813.0	611.0	595.0	16.03	38.106	
3,300.0	3,274.8	3,176.4	3,042.5	9.3	17.1	-29.01	-174.0	856.5	635.0	618.3	16.74	37.924	
3,400.0	3,373.4	3,315.2	3,173.3	9.6	18.0	-30.09	-174.7	902.9	654.3	636.8	17.52	37.339	
3,500.0	3,472.0	3,422.6	3,275.7	10.0	18.7	-30.73	-177.0	935.0	670.2	652.0	18.18	36.865	
3,600.0	3,570.6	3,505.7	3,354.9	10.4	19.2	-31.03	-180.8	960.1	686.5	667.7	18.76	36.582	
3,700.0	3,669.2	3,591.0	3,435.3	10.8	19.7	-31.15	-186.6	987.9	705.1	685.8	19.35	36.439	
3,800.0	3,767.8	3,685.9	3,524.4	11.2	20.4	-31.26	-193.5	1,019.6	724.7	704.7	19.98	36.267	
3,900.0	3,866.3	3,795.3	3,627.6	11.6	21.1	-31.47	-200.2	1,055.6	743.8	723.1	20.66	36.003	
4,000.0	3,964.9	3,891.7	3,718.7	11.9	21.8	-31.73	-205.1	1,086.6	762.1	740.8	21.30	35.779	
4,100.0	4,063.5	3,983.9	3,805.7	12.3	22.4	-31.90	-210.6	1,116.8	781.0	759.1	21.92	35.631	
4,200.0	4,162.1	4,075.3	3,891.7	12.7	23.0	-32.19	-214.2	1,147.4	800.7	778.2	22.56	35.498	
4,300.0	4,260.7	4,200.9	4,010.5	13.1	23.8	-32.70	-217.5	1,187.9	819.3	795.9	23.32	35.135	
4,400.0	4,359.3	4,296.4	4,101.3	13.5	24.4	-33.04	-220.4	1,217.4	836.3	812.3	23.97	34.896	
4,500.0	4,457.8	4,410.6	4,210.0	13.9	25.1	-33.36	-225.0	1,252.2	853.0	828.4	24.67	34.575	
4,562.8	4,519.7	4,480.8	4,277.2	14.1	25.5	-33.52	-228.3	1,272.2	862.2	837.1	25.11	34.343	
4,600.0	4,556.5	4,514.8	4,309.8	14.2	25.7	-33.66	-229.8	1,281.9	867.9	842.6	25.31	34.286	
4,700.0	4,655.5	4,605.6	4,396.6	14.5	26.3	-33.98	-233.7	1,308.3	885.7	859.8	25.81	34.315	
4,800.0	4,755.0	4,694.6	4,481.4	14.7	26.8	-34.21	-237.7	1,335.0	907.1	880.9	26.26	34.541	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 44-41-2HNB (Exist.) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 77-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
4,900.0	4,854.7	4,791.3	4,573.4	14.9	27.4	-34.36	-242.1	1,364.5	932.0	905.3	26.69	34.924	
5,000.0	4,954.7	4,892.2	4,669.4	15.1	28.0	-34.50	-245.4	1,395.0	959.4	932.3	27.08	35.431	
5,045.3	5,000.0	4,938.8	4,713.9	15.2	28.3	87.01	-246.5	1,408.8	972.5	945.2	27.34	35.578	
5,100.0	5,054.7	5,009.6	4,781.6	15.2	28.7	87.16	-248.1	1,429.3	988.4	960.8	27.59	35.822	
9,300.0	6,447.0	9,235.7	6,258.9	56.4	58.4	79.15	2,765.0	1,484.4	999.4	889.5	109.85	9.098	
9,400.0	6,447.0	9,345.7	6,258.7	58.2	60.1	79.11	2,875.0	1,482.4	996.8	883.3	113.54	8.780	
9,500.0	6,447.0	9,436.4	6,259.3	60.1	61.5	79.13	2,965.6	1,481.6	995.1	878.3	116.86	8.515	
9,598.1	6,447.0	9,520.2	6,260.5	61.9	62.8	79.19	3,049.5	1,481.7	994.3	874.3	120.04	8.283	
9,600.0	6,447.0	9,521.5	6,260.5	61.9	62.9	79.19	3,050.8	1,481.7	994.3	874.2	120.10	8.279	
9,700.0	6,447.0	9,637.3	6,260.8	63.8	64.7	79.20	3,166.5	1,482.3	994.1	870.2	123.90	8.023	
9,800.0	6,447.0	9,745.5	6,261.3	65.7	66.5	79.21	3,274.8	1,480.8	991.9	864.3	127.61	7.773	
9,900.0	6,447.0	9,839.6	6,260.7	67.5	68.1	79.15	3,368.9	1,479.3	989.7	858.7	131.07	7.551	
10,000.0	6,447.0	9,928.0	6,257.3	69.4	69.5	78.93	3,457.1	1,477.8	988.2	853.8	134.41	7.352	
10,043.6	6,447.0	9,967.4	6,255.6	70.2	70.2	78.83	3,496.5	1,477.6	988.0	852.1	135.85	7.272	
10,100.0	6,447.0	10,014.0	6,254.4	71.3	70.9	78.76	3,543.1	1,478.0	988.3	850.7	137.61	7.182	
10,200.0	6,447.0	10,136.1	6,255.5	73.1	72.9	78.82	3,665.2	1,478.3	987.6	846.1	141.51	6.979	
10,300.0	6,447.0	10,236.2	6,258.0	75.0	74.6	78.94	3,765.2	1,477.7	985.8	840.6	145.15	6.792	
10,400.0	6,447.0	10,338.1	6,258.9	76.9	76.3	78.98	3,867.1	1,476.8	984.0	835.3	148.80	6.613	
10,500.0	6,447.0	10,439.2	6,258.0	78.8	78.0	78.90	3,968.2	1,475.6	982.4	830.0	152.39	6.446	
10,600.0	6,447.0	10,527.0	6,257.9	80.6	79.4	78.89	4,056.0	1,475.2	981.2	825.5	155.67	6.303	
10,618.3	6,447.0	10,540.2	6,257.9	81.0	79.6	78.89	4,069.2	1,475.3	981.2	825.0	156.24	6.280	
10,700.0	6,447.0	10,623.9	6,258.2	82.5	81.0	78.91	4,152.9	1,476.0	981.3	822.1	159.19	6.164	
10,800.0	6,447.0	10,755.3	6,260.1	84.4	83.2	78.99	4,284.3	1,474.8	979.3	815.9	163.33	5.995	
10,900.0	6,447.0	10,847.2	6,261.3	86.3	84.8	79.04	4,376.1	1,473.3	976.7	809.9	166.82	5.855	
11,000.0	6,447.0	10,951.9	6,261.8	88.2	86.6	79.03	4,480.8	1,471.2	973.9	803.4	170.53	5.711	
11,048.0	6,447.0	10,983.0	6,261.9	89.1	87.2	79.03	4,511.9	1,470.5	972.6	800.7	171.97	5.656	SF

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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	128.10	-10.9	13.9	17.7	17.7	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	128.10	-10.9	13.9	17.7	17.5	0.22	78.807	
200.0	200.0	200.0	200.0	0.3	0.3	128.10	-10.9	13.9	17.7	17.0	0.67	26.269	
300.0	300.0	300.2	300.2	0.6	0.5	133.38	-11.7	12.4	17.0	15.9	1.11	15.314	
400.0	400.0	400.2	400.1	0.8	0.8	151.31	-13.9	7.6	15.8	14.3	1.55	10.196	
414.1	414.1	414.3	414.1	0.8	0.8	155.00	-14.3	6.7	15.8	14.2	1.62	9.766	CC, ES
500.0	500.0	499.6	499.1	1.0	1.0	179.10	-17.8	0.3	17.8	15.8	2.00	8.894	
600.0	600.0	598.5	597.5	1.2	1.2	-165.36	-24.6	-6.4	25.6	23.2	2.43	10.533	
700.0	700.0	697.7	696.2	1.5	1.5	-159.62	-33.6	-12.5	36.1	33.2	2.89	12.469	
800.0	800.0	797.2	795.0	1.7	1.8	-156.50	-42.6	-18.5	46.8	43.4	3.38	13.848	
900.0	900.0	896.6	893.8	1.9	2.1	-154.55	-51.6	-24.6	57.5	53.7	3.87	14.865	
1,000.0	1,000.0	996.0	992.6	2.1	2.4	-153.21	-60.6	-30.6	68.3	64.0	4.37	15.640	
1,100.0	1,100.0	1,095.4	1,091.4	2.4	2.7	-152.24	-69.7	-36.7	79.2	74.3	4.87	16.249	
1,200.0	1,200.0	1,194.8	1,190.2	2.6	3.0	-151.51	-78.7	-42.7	90.0	84.7	5.38	16.738	
1,300.0	1,300.0	1,294.1	1,289.0	2.8	3.3	88.30	-87.7	-48.7	100.9	95.3	5.57	18.096	
1,400.0	1,399.8	1,393.4	1,387.6	3.0	3.6	91.14	-96.7	-54.8	111.8	105.8	5.99	18.666	
1,500.0	1,499.5	1,492.4	1,486.0	3.2	3.9	95.04	-105.7	-60.8	123.2	116.8	6.42	19.199	
1,600.0	1,598.7	1,591.0	1,584.0	3.4	4.2	99.65	-114.6	-66.8	135.7	128.8	6.87	19.747	
1,682.6	1,680.3	1,672.0	1,664.6	3.6	4.4	103.78	-121.9	-71.7	147.3	140.0	7.28	20.240	
1,700.0	1,697.5	1,689.1	1,681.6	3.7	4.5	104.71	-123.5	-72.8	149.9	142.5	7.36	20.348	
1,800.0	1,796.1	1,787.0	1,778.9	3.9	4.8	109.44	-132.4	-78.7	165.5	157.6	7.89	20.963	
1,900.0	1,894.6	1,884.9	1,876.2	4.2	5.1	113.35	-141.2	-84.7	182.0	173.5	8.44	21.560	
2,000.0	1,993.2	1,982.8	1,973.6	4.6	5.4	116.61	-150.1	-90.6	199.2	190.2	9.00	22.130	
2,100.0	2,091.8	2,080.8	2,070.9	4.9	5.7	119.34	-159.0	-96.6	216.9	207.4	9.57	22.670	
2,200.0	2,190.4	2,178.7	2,168.3	5.2	6.0	121.66	-167.9	-102.5	235.1	224.9	10.14	23.177	
2,300.0	2,289.0	2,276.6	2,265.6	5.6	6.3	123.65	-176.8	-108.5	253.6	242.8	10.72	23.653	
2,400.0	2,387.6	2,374.5	2,362.9	5.9	6.6	125.37	-185.6	-114.4	272.3	261.0	11.30	24.098	
2,500.0	2,486.2	2,472.4	2,460.3	6.3	6.9	126.87	-194.5	-120.4	291.2	279.4	11.88	24.513	
2,600.0	2,584.7	2,570.4	2,557.6	6.6	7.2	128.18	-203.4	-126.3	310.3	297.9	12.46	24.902	
2,700.0	2,683.3	2,668.3	2,654.9	7.0	7.5	129.34	-212.3	-132.3	329.6	316.6	13.05	25.265	
2,800.0	2,781.9	2,766.2	2,752.3	7.4	7.8	130.38	-221.1	-138.2	349.0	335.3	13.63	25.605	
2,900.0	2,880.5	2,864.1	2,849.6	7.7	8.1	131.30	-230.0	-144.2	368.4	354.2	14.21	25.923	
3,000.0	2,979.1	2,962.1	2,947.0	8.1	8.4	132.13	-238.9	-150.1	388.0	373.2	14.80	26.221	
3,100.0	3,077.7	3,060.0	3,044.3	8.5	8.7	132.89	-247.8	-156.1	407.6	392.2	15.38	26.501	
3,200.0	3,176.2	3,157.9	3,141.6	8.9	9.0	133.57	-256.6	-162.1	427.3	411.3	15.97	26.763	
3,300.0	3,274.8	3,255.8	3,239.0	9.3	9.3	134.19	-265.5	-168.0	447.0	430.5	16.55	27.011	
3,400.0	3,373.4	3,353.8	3,336.3	9.6	9.6	134.76	-274.4	-174.0	466.8	449.7	17.13	27.244	
3,500.0	3,472.0	3,451.7	3,433.6	10.0	9.9	135.29	-283.3	-179.9	486.6	468.9	17.72	27.463	
3,600.0	3,570.6	3,549.6	3,531.0	10.4	10.3	135.77	-292.2	-185.9	506.5	488.2	18.30	27.671	
3,700.0	3,669.2	3,647.5	3,628.3	10.8	10.6	136.22	-301.0	-191.8	526.4	507.5	18.89	27.867	
3,800.0	3,767.8	3,751.4	3,731.7	11.2	10.8	136.68	-310.2	-197.9	546.1	526.6	19.47	28.050	
3,900.0	3,866.3	3,865.2	3,845.1	11.6	11.1	137.42	-317.1	-202.6	563.6	543.6	20.00	28.175	
4,000.0	3,964.9	3,979.5	3,959.3	11.9	11.3	138.44	-320.4	-204.8	578.5	558.0	20.49	28.227	
4,100.0	4,063.5	4,083.7	4,063.5	12.3	11.4	139.55	-320.6	-205.0	591.4	570.4	20.97	28.207	
4,200.0	4,162.1	4,182.3	4,162.1	12.7	11.6	140.58	-320.6	-205.0	604.3	582.9	21.41	28.221	
4,300.0	4,260.7	4,280.9	4,260.7	13.1	11.7	141.56	-320.6	-205.0	617.4	595.6	21.86	28.251	
4,400.0	4,359.3	4,379.4	4,359.3	13.5	11.8	142.50	-320.6	-205.0	630.7	608.4	22.30	28.289	
4,500.0	4,457.8	4,478.0	4,457.8	13.9	12.0	143.41	-320.6	-205.0	644.2	621.4	22.73	28.336	
4,562.8	4,519.7	4,539.9	4,519.7	14.1	12.1	143.95	-320.6	-205.0	652.7	629.7	23.01	28.368	
4,600.0	4,556.5	4,576.6	4,556.5	14.2	12.1	144.32	-320.6	-205.0	657.6	634.4	23.18	28.372	
4,700.0	4,655.5	4,675.7	4,655.5	14.5	12.3	145.13	-320.6	-205.0	668.8	645.3	23.58	28.362	
4,800.0	4,755.0	4,775.2	4,755.0	14.7	12.4	145.73	-320.6	-205.0	677.3	653.4	23.96	28.264	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
4,900.0	4,854.7	4,874.9	4,854.7	14.9	12.6	146.11	-320.6	-205.0	683.0	658.6	24.32	28.080	
5,000.0	4,954.7	4,974.9	4,954.7	15.1	12.8	146.30	-320.6	-205.0	685.7	661.1	24.66	27.813	
5,045.3	5,000.0	5,020.2	5,000.0	15.2	12.8	-92.13	-320.6	-205.0	686.0	661.2	24.82	27.644	
5,100.0	5,054.7	5,074.9	5,054.7	15.2	12.9	-92.13	-320.6	-205.0	686.0	661.0	25.00	27.440	
5,200.0	5,154.7	5,174.9	5,154.7	15.4	13.1	-92.13	-320.6	-205.0	686.0	660.7	25.34	27.074	
5,300.0	5,254.7	5,274.9	5,254.7	15.5	13.2	-92.13	-320.6	-205.0	686.0	660.4	25.68	26.714	
5,400.0	5,354.7	5,374.9	5,354.7	15.7	13.4	-92.13	-320.6	-205.0	686.0	660.0	26.03	26.360	
5,500.0	5,454.7	5,474.9	5,454.7	15.8	13.6	-92.13	-320.6	-205.0	686.0	659.7	26.37	26.013	
5,600.0	5,554.7	5,574.9	5,554.7	16.0	13.7	-92.13	-320.6	-205.0	686.0	659.3	26.72	25.671	
5,700.0	5,654.7	5,674.9	5,654.7	16.2	13.9	-92.13	-320.6	-205.0	686.0	659.0	27.08	25.336	
5,800.0	5,754.7	5,774.9	5,754.7	16.3	14.1	-92.13	-320.6	-205.0	686.0	658.6	27.43	25.007	
5,900.0	5,854.7	5,874.9	5,854.7	16.5	14.3	-92.13	-320.6	-205.0	686.0	658.2	27.79	24.684	
5,945.6	5,900.2	5,920.4	5,900.2	16.5	14.3	-92.13	-320.6	-205.0	686.0	658.1	27.96	24.538	
5,950.0	5,904.7	5,925.2	5,905.0	16.5	14.3	-92.55	-320.6	-205.0	686.0	658.1	27.96	24.536	
6,000.0	5,954.6	5,978.9	5,958.6	16.6	14.4	-92.54	-317.3	-204.9	686.0	657.9	28.11	24.404	
6,050.0	6,004.0	6,032.6	6,011.6	16.7	14.5	-92.50	-308.6	-204.8	685.9	657.7	28.20	24.323	
6,100.0	6,052.4	6,086.3	6,063.3	16.7	14.5	-92.43	-294.5	-204.5	685.8	657.5	28.23	24.287	
6,150.0	6,099.5	6,139.8	6,113.1	16.7	14.5	-92.34	-275.1	-204.2	685.5	657.3	28.22	24.289	
6,200.0	6,144.7	6,193.1	6,160.6	16.7	14.4	-92.23	-250.9	-203.9	685.3	657.1	28.18	24.316	
6,250.0	6,187.6	6,246.2	6,205.2	16.7	14.4	-92.09	-222.0	-203.4	685.0	656.9	28.13	24.354	
6,300.0	6,228.0	6,299.1	6,246.4	16.6	14.4	-91.94	-189.0	-202.9	684.6	656.6	28.07	24.388	
6,350.0	6,265.2	6,351.7	6,283.9	16.6	14.3	-91.77	-152.1	-202.3	684.2	656.2	28.05	24.398	
6,400.0	6,299.2	6,404.0	6,317.3	16.5	14.3	-91.58	-111.8	-201.6	683.8	655.8	28.06	24.367	
6,450.0	6,329.4	6,456.1	6,346.4	16.5	14.3	-91.37	-68.7	-200.9	683.4	655.3	28.15	24.280	
6,500.0	6,355.8	6,507.8	6,370.8	16.4	14.2	-91.16	-23.1	-200.2	683.0	654.6	28.31	24.124	
6,550.0	6,377.9	6,559.2	6,390.5	16.4	14.3	-90.93	24.3	-199.5	682.5	653.9	28.57	23.891	
6,600.0	6,395.6	6,610.1	6,405.4	16.4	14.4	-90.70	72.9	-198.7	682.0	653.1	28.93	23.578	
6,627.4	6,403.4	6,637.4	6,412.5	16.4	14.5	-90.66	99.4	-198.3	681.8	652.6	29.18	23.363	
6,700.0	6,422.2	6,710.2	6,431.2	16.4	14.9	-90.66	169.6	-197.2	681.2	651.2	29.95	22.743	
6,727.4	6,429.3	6,738.0	6,437.3	16.5	15.1	-90.56	196.8	-196.7	681.0	650.6	30.31	22.467	
6,750.0	6,434.6	6,760.9	6,441.2	16.5	15.3	-90.45	219.3	-196.4	680.8	650.1	30.63	22.228	
6,800.0	6,443.1	6,811.3	6,446.3	16.7	15.7	-90.21	269.4	-195.6	680.3	648.9	31.39	21.674	
6,850.0	6,446.8	6,861.3	6,447.0	17.0	16.2	-90.00	319.4	-194.8	679.9	647.6	32.24	21.088	
6,863.8	6,447.0	6,875.0	6,447.0	17.1	16.3	-90.00	333.2	-194.6	679.7	647.3	32.49	20.923	
6,900.0	6,447.0	6,911.3	6,447.0	17.4	16.7	-90.00	369.4	-194.0	679.4	646.3	33.17	20.483	
7,000.0	6,447.0	7,011.3	6,447.0	18.4	17.8	-90.00	469.4	-192.4	678.6	643.3	35.27	19.238	
7,100.0	6,447.0	7,111.3	6,447.0	19.5	19.0	-90.00	569.4	-190.8	677.7	640.1	37.65	18.002	
7,200.0	6,447.0	7,211.3	6,447.0	20.8	20.3	-90.00	669.4	-189.2	676.8	636.6	40.25	16.817	
7,300.0	6,447.0	7,311.3	6,447.0	22.1	21.7	-90.00	769.3	-187.6	676.0	633.0	43.03	15.709	
7,400.0	6,447.0	7,411.3	6,447.0	23.6	23.2	-90.00	869.3	-186.0	675.1	629.2	45.97	14.686	
7,500.0	6,447.0	7,511.3	6,447.0	25.1	24.8	-90.00	969.3	-184.4	674.3	625.2	49.03	13.752	
7,600.0	6,447.0	7,611.2	6,447.0	26.6	26.4	-90.00	1,069.3	-182.8	673.4	621.2	52.19	12.902	
7,700.0	6,447.0	7,711.2	6,447.0	28.2	28.0	-90.00	1,169.3	-181.2	672.5	617.1	55.44	12.131	
7,800.0	6,447.0	7,811.2	6,447.0	29.8	29.7	-90.00	1,269.3	-179.6	671.7	612.9	58.76	11.431	
7,900.0	6,447.0	7,911.2	6,447.0	31.5	31.3	-90.00	1,369.2	-178.1	670.8	608.7	62.13	10.796	
8,000.0	6,447.0	8,011.2	6,447.0	33.2	33.1	-90.00	1,469.2	-176.5	670.0	604.4	65.56	10.219	
8,100.0	6,447.0	8,111.2	6,447.0	34.9	34.8	-90.00	1,569.2	-174.9	669.1	600.1	69.03	9.692	
8,200.0	6,447.0	8,211.2	6,447.0	36.6	36.6	-90.00	1,669.2	-173.3	668.2	595.7	72.54	9.212	
8,300.0	6,447.0	8,311.2	6,447.0	38.3	38.3	-90.00	1,769.2	-171.7	667.4	591.3	76.08	8.772	
8,400.0	6,447.0	8,411.2	6,447.0	40.1	40.1	-90.00	1,869.2	-170.1	666.5	586.9	79.64	8.369	
8,500.0	6,447.0	8,511.2	6,447.0	41.9	41.9	-90.00	1,969.1	-168.5	665.6	582.4	83.23	7.997	
8,600.0	6,447.0	8,611.2	6,447.0	43.7	43.7	-90.00	2,069.1	-166.9	664.8	577.9	86.84	7.655	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
8,700.0	6,447.0	8,711.2	6,447.0	45.5	45.5	-90.00	2,169.1	-165.3	663.9	573.4	90.47	7.339	
8,800.0	6,447.0	8,811.2	6,447.0	47.3	47.3	-90.00	2,269.1	-163.7	663.1	568.9	94.12	7.045	
8,900.0	6,447.0	8,911.2	6,447.0	49.1	49.2	-90.00	2,369.1	-162.1	662.2	564.4	97.77	6.773	
9,000.0	6,447.0	9,011.2	6,447.0	50.9	51.0	-90.00	2,469.1	-160.5	661.3	559.9	101.45	6.519	
9,100.0	6,447.0	9,111.2	6,447.0	52.7	52.9	-90.00	2,569.0	-158.9	660.5	555.3	105.13	6.282	
9,200.0	6,447.0	9,211.2	6,447.0	54.6	54.7	-90.00	2,669.0	-157.4	659.6	550.8	108.82	6.061	
9,300.0	6,447.0	9,311.2	6,447.0	56.4	56.5	-90.00	2,769.0	-155.8	658.7	546.2	112.53	5.854	
9,400.0	6,447.0	9,411.2	6,447.0	58.2	58.4	-90.00	2,869.0	-154.2	657.9	541.6	116.24	5.660	
9,500.0	6,447.0	9,511.2	6,447.0	60.1	60.3	-90.00	2,969.0	-152.6	657.0	537.1	119.96	5.477	
9,600.0	6,447.0	9,611.2	6,447.0	61.9	62.1	-90.00	3,069.0	-151.0	656.2	532.5	123.68	5.305	
9,700.0	6,447.0	9,711.2	6,447.0	63.8	64.0	-90.00	3,169.0	-149.4	655.3	527.9	127.42	5.143	
9,800.0	6,447.0	9,811.2	6,447.0	65.7	65.9	-90.00	3,268.9	-147.8	654.4	523.3	131.15	4.990	
9,900.0	6,447.0	9,911.2	6,447.0	67.5	67.7	-90.00	3,368.9	-146.2	653.6	518.7	134.90	4.845	
10,000.0	6,447.0	10,011.2	6,447.0	69.4	69.6	-90.00	3,468.9	-144.6	652.7	514.1	138.65	4.708	
10,100.0	6,447.0	10,111.2	6,447.0	71.3	71.5	-90.00	3,568.9	-143.0	651.9	509.5	142.40	4.578	
10,200.0	6,447.0	10,211.2	6,447.0	73.1	73.4	-90.00	3,668.9	-141.4	651.0	504.8	146.16	4.454	
10,300.0	6,447.0	10,311.1	6,447.0	75.0	75.2	-90.00	3,768.9	-139.8	650.1	500.2	149.92	4.337	
10,400.0	6,447.0	10,411.1	6,447.0	76.9	77.1	-90.00	3,868.8	-138.3	649.3	495.6	153.68	4.225	
10,500.0	6,447.0	10,511.1	6,447.0	78.8	79.0	-90.00	3,968.8	-136.7	648.4	491.0	157.45	4.118	
10,600.0	6,447.0	10,611.1	6,447.0	80.6	80.9	-90.00	4,068.8	-135.1	647.5	486.3	161.22	4.017	
10,700.0	6,447.0	10,711.1	6,447.0	82.5	82.8	-90.00	4,168.8	-133.5	646.7	481.7	164.99	3.919	
10,800.0	6,447.0	10,811.1	6,447.0	84.4	84.7	-90.00	4,268.8	-131.9	645.8	477.1	168.77	3.827	
10,900.0	6,447.0	10,911.1	6,447.0	86.3	86.5	-90.00	4,368.8	-130.3	645.0	472.4	172.55	3.738	
11,000.0	6,447.0	11,011.1	6,447.0	88.2	88.4	-90.00	4,468.7	-128.7	644.1	467.8	176.33	3.653	
11,036.7	6,447.0	11,042.3	6,447.0	88.9	89.0	-90.00	4,499.9	-128.2	643.8	466.2	177.61	3.625	
11,048.0	6,447.0	11,042.3	6,447.0	89.1	89.0	-90.00	4,499.9	-128.2	643.9	466.1	177.83	3.621	SF

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 O-K-2HNB (Exist.) - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 ft

Survey Program: 138-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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	132.45	-25.5	27.9	37.8				
100.0	100.0	100.4	100.4	0.1	0.1	132.35	-25.1	27.5	37.2	37.0	0.23	164.520	
200.0	200.0	200.4	200.4	0.3	0.3	132.10	-24.1	26.6	35.9	35.3	0.62	57.824	
300.0	300.0	300.4	300.3	0.6	0.5	132.12	-23.4	25.9	35.0	33.9	1.05	33.228	
400.0	400.0	400.5	400.5	0.8	0.7	132.18	-22.7	25.1	33.8	32.3	1.49	22.728	
500.0	500.0	500.5	500.5	1.0	0.9	131.10	-21.2	24.3	32.3	30.4	1.93	16.778	
600.0	600.0	600.5	600.4	1.2	1.1	129.18	-19.4	23.8	30.8	28.4	2.36	13.033	
700.0	700.0	700.4	700.3	1.5	1.3	126.79	-17.6	23.6	29.5	26.7	2.79	10.542	
744.1	744.1	744.2	744.1	1.6	1.4	125.47	-16.9	23.8	29.2	26.2	2.98	9.785	
800.0	800.0	800.1	800.0	1.7	1.5	123.90	-16.3	24.3	29.3	26.0	3.23	9.075	
900.0	900.0	900.4	900.3	1.9	1.8	125.06	-16.4	23.4	28.6	24.9	3.66	7.808	
1,000.0	1,000.0	1,000.5	1,000.4	2.1	2.0	132.52	-18.4	20.0	27.2	23.1	4.10	6.642	
1,063.7	1,063.7	1,064.0	1,063.7	2.3	2.1	141.25	-20.8	16.7	26.7	22.3	4.38	6.100	CC, ES
1,100.0	1,100.0	1,100.1	1,099.7	2.4	2.2	147.55	-22.7	14.4	26.9	22.4	4.54	5.932	
1,200.0	1,200.0	1,199.3	1,198.3	2.6	2.4	167.92	-29.6	6.3	30.3	25.3	4.99	6.076	
1,300.0	1,300.0	1,297.6	1,295.5	2.8	2.7	68.21	-38.2	-5.1	38.1	32.7	5.45	7.002	
1,400.0	1,399.8	1,395.3	1,391.8	3.0	3.0	86.24	-48.3	-18.2	51.4	45.6	5.85	8.783	
1,500.0	1,499.5	1,494.4	1,489.8	3.2	3.2	98.58	-58.1	-30.1	66.9	60.6	6.25	10.693	
1,600.0	1,598.7	1,591.7	1,585.9	3.4	3.5	108.33	-67.0	-41.5	84.7	78.0	6.66	12.706	
1,682.6	1,680.3	1,672.5	1,665.8	3.6	3.8	115.37	-73.8	-51.3	101.7	94.7	7.02	14.478	
1,700.0	1,697.5	1,689.5	1,682.7	3.7	3.8	116.78	-75.1	-53.3	105.4	98.3	7.10	14.848	
1,800.0	1,796.1	1,786.4	1,778.6	3.9	4.1	123.46	-81.9	-64.7	127.7	120.1	7.56	16.884	
1,900.0	1,894.6	1,882.3	1,873.6	4.2	4.4	128.32	-88.2	-76.4	151.3	143.3	8.03	18.840	
2,000.0	1,993.2	1,977.9	1,968.3	4.6	4.7	131.79	-94.8	-88.4	176.2	167.7	8.52	20.681	
2,100.0	2,091.8	2,075.8	2,065.1	4.9	5.0	134.48	-101.5	-100.6	201.4	192.3	9.01	22.345	
2,200.0	2,190.4	2,173.6	2,162.1	5.2	5.3	136.68	-107.6	-112.1	226.2	216.7	9.50	23.794	
2,300.0	2,289.0	2,270.7	2,258.4	5.6	5.6	138.28	-114.2	-123.0	250.7	240.7	10.00	25.066	
2,400.0	2,387.6	2,362.0	2,348.8	5.9	5.8	139.59	-120.1	-133.6	275.8	265.3	10.49	26.278	
2,500.0	2,486.2	2,454.6	2,440.4	6.3	6.1	140.76	-126.0	-145.8	302.4	291.4	11.00	27.491	
2,600.0	2,584.7	2,543.6	2,528.2	6.6	6.5	141.72	-131.9	-159.7	331.5	320.0	11.51	28.815	
2,700.0	2,683.3	2,634.1	2,617.1	7.0	6.8	142.66	-137.2	-175.4	362.4	350.4	12.01	30.167	
2,800.0	2,781.9	2,732.7	2,714.1	7.4	7.2	143.57	-142.8	-192.6	393.4	380.8	12.53	31.389	
2,900.0	2,880.5	2,830.2	2,810.0	7.7	7.5	144.29	-148.6	-208.7	423.6	410.6	13.04	32.476	
3,000.0	2,979.1	2,931.1	2,909.4	8.1	7.8	144.84	-155.2	-224.7	453.3	439.7	13.57	33.403	
3,100.0	3,077.7	3,035.2	3,012.2	8.5	8.2	145.20	-163.1	-239.4	481.3	467.2	14.11	34.112	
3,200.0	3,176.2	3,138.3	3,114.1	8.9	8.5	145.42	-171.7	-252.4	507.8	493.2	14.65	34.657	
3,300.0	3,274.8	3,233.5	3,208.2	9.3	8.8	145.54	-180.2	-263.8	533.9	518.7	15.19	35.149	
3,400.0	3,373.4	3,323.9	3,297.5	9.6	9.1	145.59	-188.7	-275.2	560.5	544.8	15.72	35.649	
3,500.0	3,472.0	3,411.0	3,383.3	10.0	9.5	145.64	-196.9	-287.3	588.4	572.2	16.25	36.207	
3,600.0	3,570.6	3,494.8	3,465.8	10.4	9.8	145.71	-204.6	-300.5	618.1	601.3	16.78	36.843	
3,700.0	3,669.2	3,589.2	3,558.4	10.8	10.1	145.78	-213.3	-316.5	648.9	631.6	17.33	37.451	
3,800.0	3,767.8	3,691.0	3,658.4	11.2	10.5	145.82	-222.9	-333.2	679.3	661.4	17.89	37.962	
3,900.0	3,866.3	3,795.7	3,761.4	11.6	10.9	145.94	-232.0	-349.0	708.3	689.9	18.46	38.371	
4,000.0	3,964.9	3,893.6	3,858.0	11.9	11.2	146.07	-239.9	-363.1	736.7	717.7	19.00	38.767	
4,100.0	4,063.5	3,986.9	3,950.1	12.3	11.6	146.21	-247.2	-376.6	765.1	745.6	19.54	39.157	
4,200.0	4,162.1	4,077.3	4,039.1	12.7	11.9	146.35	-254.2	-390.1	794.0	773.9	20.07	39.553	
4,300.0	4,260.7	4,166.4	4,126.8	13.1	12.2	146.42	-261.8	-404.1	823.7	803.0	20.61	39.966	
4,400.0	4,359.3	4,268.1	4,226.9	13.5	12.6	146.51	-270.4	-420.1	853.3	832.1	21.18	40.295	
4,500.0	4,457.8	4,365.6	4,322.9	13.9	13.0	146.65	-277.6	-435.0	882.5	860.7	21.72	40.629	
4,562.8	4,519.7	4,426.7	4,383.3	14.1	13.2	146.79	-281.2	-444.2	900.7	878.6	22.06	40.832	
4,600.0	4,556.5	4,464.5	4,420.6	14.2	13.3	146.99	-283.5	-449.9	911.3	889.0	22.28	40.907	
4,700.0	4,655.5	4,563.6	4,518.3	14.5	13.7	147.32	-290.5	-464.3	937.3	914.5	22.81	41.095	

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

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 O-K-2HNB (Exist.) - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 ft

Survey Program: 138-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
4,800.0	4,755.0	4,651.8	4,605.3	14.7	14.0	147.47	-297.4	-477.5	961.0	937.7	23.30	41.250	
4,900.0	4,854.7	4,756.6	4,708.5	14.9	14.4	147.45	-305.6	-493.6	982.1	958.3	23.80	41.270	
5,000.0	4,954.7	4,906.0	4,856.3	15.1	14.9	147.19	-315.9	-512.6	998.0	973.6	24.36	40.962	
8,700.0	6,447.0	8,602.4	6,278.1	45.5	42.8	-80.26	2,181.6	-485.5	998.7	912.8	85.83	11.635	
8,800.0	6,447.0	8,715.8	6,276.6	47.3	44.6	-80.14	2,294.8	-481.1	995.7	906.3	89.44	11.132	
8,900.0	6,447.0	8,798.7	6,278.9	49.1	46.0	-80.26	2,377.7	-479.4	993.9	901.3	92.63	10.730	
8,979.5	6,447.0	8,866.0	6,281.6	50.5	47.1	-80.41	2,444.9	-478.9	993.3	898.1	95.26	10.428	
9,000.0	6,447.0	8,883.9	6,282.2	50.9	47.4	-80.45	2,462.8	-478.9	993.4	897.4	95.95	10.353	
9,100.0	6,447.0	8,971.4	6,284.5	52.7	48.9	-80.59	2,550.3	-479.5	994.4	895.1	99.33	10.011	
9,200.0	6,447.0	9,080.2	6,284.6	54.6	50.8	-80.61	2,659.1	-479.9	995.4	892.3	103.04	9.660	
9,300.0	6,447.0	9,170.6	6,283.6	56.4	52.4	-80.56	2,749.5	-480.0	996.4	889.9	106.45	9.360	
9,400.0	6,447.0	9,300.1	6,281.3	58.2	54.6	-80.43	2,879.0	-479.2	996.9	886.5	110.45	9.026	
9,500.0	6,447.0	9,454.5	6,279.8	60.1	57.1	-80.27	3,033.1	-470.5	991.9	877.1	114.81	8.640	
9,600.0	6,447.0	9,543.8	6,280.6	61.9	58.6	-80.27	3,122.1	-464.4	985.7	867.6	118.11	8.346	
9,700.0	6,447.0	9,632.0	6,283.1	63.8	60.0	-80.36	3,210.2	-459.0	980.0	858.6	121.44	8.070	
9,800.0	6,447.0	9,707.8	6,284.9	65.7	61.3	-80.45	3,285.9	-456.1	976.6	852.0	124.62	7.837	
9,872.5	6,447.0	9,760.0	6,285.6	67.0	62.2	-80.48	3,338.1	-455.2	975.8	848.9	126.89	7.690	
9,900.0	6,447.0	9,780.3	6,285.5	67.5	62.6	-80.47	3,358.3	-455.1	975.9	848.1	127.75	7.639	
10,000.0	6,447.0	9,857.5	6,284.2	69.4	64.0	-80.42	3,435.6	-456.1	978.0	847.1	130.95	7.469	
10,100.0	6,447.0	9,963.6	6,281.3	71.3	65.8	-80.27	3,541.6	-457.6	980.6	846.0	134.62	7.285	
10,200.0	6,447.0	10,077.3	6,277.3	73.1	67.8	-80.06	3,655.2	-458.3	982.5	844.2	138.34	7.102	
10,300.0	6,447.0	10,172.6	6,277.1	75.0	69.4	-80.05	3,750.5	-459.0	984.0	842.2	141.80	6.939	
10,400.0	6,447.0	10,303.8	6,278.7	76.9	71.7	-80.14	3,881.7	-457.6	983.3	837.4	145.94	6.738	
10,500.0	6,447.0	10,412.2	6,278.2	78.8	73.6	-80.09	3,990.0	-454.5	981.3	831.7	149.67	6.557	
10,600.0	6,447.0	10,503.2	6,278.5	80.6	75.2	-80.09	4,081.0	-452.2	979.4	826.3	153.12	6.397	
10,700.0	6,447.0	10,610.0	6,278.9	82.5	77.0	-80.10	4,187.7	-450.4	978.5	821.6	156.83	6.239	
10,800.0	6,447.0	10,705.0	6,279.0	84.4	78.7	-80.09	4,282.7	-447.9	976.6	816.3	160.34	6.091	
10,900.0	6,447.0	10,795.0	6,279.0	86.3	80.2	-80.08	4,372.7	-446.1	975.4	811.6	163.77	5.956	
11,000.0	6,447.0	10,894.2	6,278.9	88.2	82.0	-80.07	4,471.9	-444.7	974.8	807.4	167.35	5.824	
11,029.2	6,447.0	10,917.0	6,278.9	88.7	82.4	-80.07	4,494.7	-444.4	974.6	806.3	168.30	5.791	
11,048.0	6,447.0	10,917.0	6,278.9	89.1	82.4	-80.07	4,494.7	-444.4	974.8	806.1	168.65	5.780 SF	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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	-43.74	14.6	-13.9	20.2				
100.0	100.0	100.0	100.0	0.1	0.1	-43.74	14.6	-13.9	20.2	19.9	0.22	89.706	
200.0	200.0	200.0	200.0	0.3	0.3	-43.74	14.6	-13.9	20.2	19.5	0.67	29.902	
300.0	300.0	300.0	300.0	0.6	0.6	-43.74	14.6	-13.9	20.2	19.0	1.12	17.941	
400.0	400.0	400.0	400.0	0.8	0.8	-43.74	14.6	-13.9	20.2	18.6	1.57	12.815	
500.0	500.0	500.0	500.0	1.0	1.0	-43.74	14.6	-13.9	20.2	18.1	2.02	9.967	
600.0	600.0	600.0	600.0	1.2	1.2	-43.74	14.6	-13.9	20.2	17.7	2.47	8.155	
700.0	700.0	700.0	700.0	1.5	1.5	-43.74	14.6	-13.9	20.2	17.2	2.92	6.900	
800.0	800.0	800.0	800.0	1.7	1.7	-43.74	14.6	-13.9	20.2	16.8	3.37	5.980	
900.0	900.0	900.0	900.0	1.9	1.9	-43.74	14.6	-13.9	20.2	16.3	3.82	5.277	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-43.74	14.6	-13.9	20.2	15.9	4.27	4.721	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-43.74	14.6	-13.9	20.2	15.4	4.72	4.272	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-43.74	14.6	-13.9	20.2	15.0	5.17	3.900	CC, ES
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-166.44	14.6	-13.9	21.9	16.3	5.60	3.905	
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	-169.03	14.6	-13.9	27.0	21.0	6.00	4.494	
1,500.0	1,499.5	1,500.5	1,500.5	3.2	3.2	-170.39	14.2	-12.2	34.0	27.6	6.39	5.323	
1,600.0	1,598.7	1,601.4	1,601.3	3.4	3.4	-169.82	12.9	-7.1	41.4	34.6	6.76	6.119	
1,682.6	1,680.3	1,684.9	1,684.4	3.6	3.6	-168.53	11.2	-0.2	47.7	40.6	7.07	6.744	
1,700.0	1,697.5	1,702.5	1,702.0	3.7	3.7	-168.18	10.8	1.6	49.0	41.9	7.15	6.860	
1,800.0	1,796.1	1,803.9	1,802.6	3.9	3.9	-165.38	7.8	13.7	54.9	47.3	7.58	7.240	
1,900.0	1,894.6	1,905.4	1,902.8	4.2	4.1	-161.11	4.0	29.3	57.9	49.9	8.04	7.201	
2,000.0	1,993.2	2,006.8	2,002.3	4.6	4.4	-155.02	-0.6	48.3	58.6	50.0	8.57	6.837	
2,100.0	2,091.8	2,107.9	2,100.7	4.9	4.8	-146.50	-6.0	70.6	57.6	48.4	9.20	6.259	
2,200.0	2,190.4	2,208.3	2,197.6	5.2	5.2	-134.86	-12.3	96.1	56.2	46.2	10.01	5.614	
2,249.7	2,239.4	2,257.9	2,245.2	5.4	5.4	-127.77	-15.6	109.9	55.9	45.4	10.49	5.329	
2,300.0	2,289.0	2,307.9	2,292.7	5.6	5.6	-119.84	-19.2	124.7	56.3	45.3	11.01	5.115	
2,400.0	2,387.6	2,406.4	2,385.9	5.9	6.2	-102.87	-26.9	155.9	60.3	48.3	12.04	5.010	
2,500.0	2,486.2	2,504.6	2,478.4	6.3	6.7	-88.33	-34.7	188.0	69.2	56.3	12.89	5.370	
2,600.0	2,584.7	2,602.9	2,570.9	6.6	7.3	-77.55	-42.5	220.0	81.5	68.0	13.57	6.011	
2,700.0	2,683.3	2,701.1	2,663.5	7.0	7.9	-69.75	-50.3	252.0	96.0	81.8	14.16	6.780	
2,800.0	2,781.9	2,799.3	2,756.0	7.4	8.5	-64.04	-58.1	284.0	111.7	97.0	14.72	7.589	
2,900.0	2,880.5	2,897.5	2,848.5	7.7	9.2	-59.76	-65.9	316.0	128.2	113.0	15.28	8.394	
3,000.0	2,979.1	2,995.7	2,941.1	8.1	9.8	-56.46	-73.7	348.0	145.3	129.5	15.84	9.173	
3,100.0	3,077.7	3,094.0	3,033.6	8.5	10.5	-53.86	-81.5	380.1	162.8	146.3	16.42	9.915	
3,200.0	3,176.2	3,192.2	3,126.1	8.9	11.1	-51.76	-89.3	412.1	180.5	163.5	17.00	10.617	
3,300.0	3,274.8	3,290.4	3,218.6	9.3	11.8	-50.04	-97.1	444.1	198.4	180.8	17.59	11.277	
3,400.0	3,373.4	3,388.6	3,311.2	9.6	12.5	-48.61	-105.0	476.1	216.4	198.2	18.19	11.897	
3,500.0	3,472.0	3,486.9	3,403.7	10.0	13.2	-47.40	-112.8	508.1	234.6	215.8	18.80	12.479	
3,600.0	3,570.6	3,585.1	3,496.2	10.4	13.8	-46.36	-120.6	540.2	252.8	233.4	19.41	13.025	
3,700.0	3,669.2	3,683.3	3,588.8	10.8	14.5	-45.46	-128.4	572.2	271.2	251.1	20.03	13.538	
3,800.0	3,767.8	3,781.5	3,681.3	11.2	15.2	-44.67	-136.2	604.2	289.5	268.9	20.65	14.020	
3,900.0	3,866.3	3,879.8	3,773.8	11.6	15.9	-43.98	-144.0	636.2	308.0	286.7	21.28	14.472	
4,000.0	3,964.9	3,978.0	3,866.4	11.9	16.6	-43.37	-151.8	668.2	326.4	304.5	21.91	14.899	
4,100.0	4,063.5	4,076.2	3,958.9	12.3	17.3	-42.82	-159.6	700.2	344.9	322.4	22.54	15.301	
4,200.0	4,162.1	4,174.4	4,051.4	12.7	18.0	-42.33	-167.4	732.3	363.4	340.3	23.18	15.680	
4,300.0	4,260.7	4,272.7	4,143.9	13.1	18.6	-41.88	-175.2	764.3	382.0	358.2	23.82	16.038	
4,400.0	4,359.3	4,370.9	4,236.5	13.5	19.3	-41.48	-183.0	796.3	400.6	376.1	24.46	16.377	
4,500.0	4,457.8	4,469.1	4,329.0	13.9	20.0	-41.11	-190.9	828.3	419.1	394.0	25.10	16.698	
4,562.8	4,519.7	4,530.8	4,387.1	14.1	20.5	-40.89	-195.8	848.4	430.8	405.3	25.51	16.890	
4,600.0	4,556.5	4,567.3	4,421.5	14.2	20.7	-40.85	-198.7	860.3	437.9	412.2	25.74	17.016	
4,700.0	4,655.5	4,665.0	4,513.5	14.5	21.4	-40.57	-206.4	892.2	458.8	432.5	26.26	17.473	
4,800.0	4,755.0	4,762.0	4,604.9	14.7	22.1	-40.10	-214.1	923.8	482.3	455.6	26.70	18.066	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
4,900.0	4,854.7	4,858.1	4,695.5	14.9	22.8	-39.48	-221.8	955.1	508.6	481.5	27.06	18.791	
5,000.0	4,954.7	4,953.3	4,785.2	15.1	23.5	-38.75	-229.4	986.2	537.5	510.2	27.36	19.647	
5,045.3	5,000.0	4,996.2	4,825.5	15.2	23.8	83.16	-232.8	1,000.1	551.6	524.0	27.57	20.003	
5,100.0	5,054.7	5,056.3	4,882.3	15.2	24.2	83.89	-237.5	1,019.4	568.6	540.9	27.70	20.527	
5,200.0	5,154.7	5,174.5	4,995.0	15.4	24.8	85.09	-245.9	1,053.9	597.2	569.2	27.94	21.370	
5,300.0	5,254.7	5,295.6	5,111.9	15.5	25.3	86.05	-253.4	1,084.6	622.0	593.8	28.22	22.042	
5,400.0	5,354.7	5,419.4	5,232.6	15.7	25.8	86.79	-259.8	1,110.9	643.0	614.5	28.53	22.540	
5,500.0	5,454.7	5,545.3	5,356.6	15.8	26.2	87.36	-265.1	1,132.5	659.9	631.1	28.86	22.868	
5,600.0	5,554.7	5,672.9	5,483.1	16.0	26.5	87.77	-269.1	1,149.0	672.7	643.5	29.21	23.033	
5,700.0	5,654.7	5,801.9	5,611.5	16.2	26.8	88.03	-271.8	1,160.0	681.2	651.6	29.56	23.041	
5,800.0	5,754.7	5,931.6	5,741.1	16.3	27.0	88.16	-273.1	1,165.5	685.4	655.4	29.93	22.902	
5,900.0	5,854.7	6,045.2	5,854.7	16.5	27.1	88.17	-273.2	1,166.1	685.8	655.5	30.28	22.650	
5,945.6	5,900.2	6,090.7	5,900.2	16.5	27.1	88.17	-273.2	1,166.1	685.8	655.4	30.43	22.536	
5,950.0	5,904.7	6,095.0	5,904.5	16.5	27.1	87.75	-273.2	1,166.1	685.8	655.4	30.36	22.590	
6,000.0	5,954.6	6,143.1	5,952.5	16.6	27.2	87.77	-270.6	1,166.1	685.8	655.3	30.50	22.484	
6,050.0	6,004.0	6,191.2	6,000.0	16.7	27.2	87.80	-263.6	1,166.0	685.7	655.1	30.58	22.423	
6,100.0	6,052.4	6,239.3	6,046.8	16.7	27.2	87.85	-252.2	1,166.0	685.6	655.0	30.60	22.402	
6,150.0	6,099.5	6,287.4	6,092.3	16.7	27.2	87.92	-236.5	1,166.0	685.4	654.8	30.58	22.413	
6,200.0	6,144.7	6,335.7	6,136.3	16.7	27.2	88.01	-216.7	1,166.0	685.2	654.7	30.52	22.448	
6,250.0	6,187.6	6,384.0	6,178.3	16.7	27.2	88.12	-192.8	1,166.0	685.0	654.5	30.45	22.496	
6,300.0	6,228.0	6,432.4	6,217.9	16.6	27.2	88.24	-165.1	1,165.9	684.7	654.3	30.37	22.545	
6,350.0	6,265.2	6,480.9	6,254.9	16.6	27.2	88.38	-133.8	1,165.9	684.4	654.1	30.31	22.580	
6,400.0	6,299.2	6,529.5	6,289.0	16.5	27.1	88.53	-99.1	1,165.8	684.0	653.7	30.28	22.588	
6,450.0	6,329.4	6,578.3	6,319.7	16.5	27.1	88.70	-61.2	1,165.8	683.6	653.3	30.31	22.555	
6,500.0	6,355.8	6,627.2	6,346.8	16.4	27.1	88.88	-20.5	1,165.7	683.2	652.8	30.41	22.470	
6,550.0	6,377.9	6,676.3	6,370.0	16.4	27.0	89.07	22.6	1,165.7	682.8	652.2	30.59	22.324	
6,600.0	6,395.6	6,725.5	6,389.2	16.4	27.0	89.27	68.0	1,165.6	682.4	651.5	30.86	22.113	
6,627.4	6,403.4	6,752.5	6,397.8	16.4	27.0	89.38	93.6	1,165.6	682.2	651.1	31.05	21.974	
6,700.0	6,422.2	6,824.9	6,416.9	16.4	27.0	89.42	163.4	1,165.5	681.6	649.8	31.73	21.479	
6,727.4	6,429.3	6,852.3	6,424.0	16.5	27.0	89.42	189.9	1,165.4	681.3	649.3	32.04	21.264	
6,750.0	6,434.6	6,874.9	6,429.9	16.5	27.0	89.48	211.7	1,165.4	681.1	648.8	32.31	21.082	
6,800.0	6,443.1	6,924.5	6,440.2	16.7	27.1	89.69	260.2	1,165.3	680.7	647.7	32.98	20.641	
6,850.0	6,446.8	6,974.3	6,445.8	17.0	27.1	89.90	309.6	1,165.3	680.3	646.5	33.73	20.170	
6,863.8	6,447.0	6,988.0	6,446.6	17.1	27.2	89.96	323.3	1,165.2	680.1	646.2	33.94	20.038	
6,900.0	6,447.0	7,024.2	6,447.0	17.4	27.2	90.00	359.5	1,165.2	679.8	645.3	34.57	19.667	
7,000.0	6,447.0	7,124.2	6,447.0	18.4	27.5	90.00	459.5	1,165.1	679.0	642.5	36.51	18.598	
7,100.0	6,447.0	7,224.2	6,447.0	19.5	27.9	90.00	559.5	1,164.9	678.1	639.4	38.72	17.511	
7,200.0	6,447.0	7,324.2	6,447.0	20.8	28.4	90.00	659.5	1,164.8	677.2	636.0	41.18	16.445	
7,300.0	6,447.0	7,424.2	6,447.0	22.1	29.1	90.00	759.5	1,164.7	676.4	632.5	43.84	15.429	
7,400.0	6,447.0	7,524.2	6,447.0	23.6	29.9	90.00	859.5	1,164.5	675.5	628.8	46.66	14.478	
7,500.0	6,447.0	7,624.2	6,447.0	25.1	30.9	90.00	959.5	1,164.4	674.6	625.0	49.61	13.598	
7,600.0	6,447.0	7,724.2	6,447.0	26.6	31.9	90.00	1,059.5	1,164.2	673.8	621.1	52.68	12.789	
7,700.0	6,447.0	7,824.2	6,447.0	28.2	33.1	90.00	1,159.5	1,164.1	672.9	617.0	55.85	12.048	
7,800.0	6,447.0	7,924.2	6,447.0	29.8	34.4	90.00	1,259.5	1,164.0	672.0	612.9	59.10	11.372	
7,900.0	6,447.0	8,024.2	6,447.0	31.5	35.7	90.00	1,359.5	1,163.8	671.2	608.8	62.41	10.754	
8,000.0	6,447.0	8,124.2	6,447.0	33.2	37.1	90.00	1,459.5	1,163.7	670.3	604.5	65.78	10.190	
8,100.0	6,447.0	8,224.2	6,447.0	34.9	38.6	90.00	1,559.5	1,163.6	669.4	600.2	69.20	9.674	
8,200.0	6,447.0	8,324.2	6,447.0	36.6	40.1	90.00	1,659.5	1,163.4	668.6	595.9	72.66	9.202	
8,300.0	6,447.0	8,424.2	6,447.0	38.3	41.7	90.00	1,759.5	1,163.3	667.7	591.5	76.15	8.768	
8,400.0	6,447.0	8,524.2	6,447.0	40.1	43.3	90.00	1,859.5	1,163.2	666.8	587.1	79.68	8.369	
8,500.0	6,447.0	8,624.1	6,447.0	41.9	44.9	90.00	1,959.5	1,163.0	666.0	582.7	83.24	8.001	
8,600.0	6,447.0	8,724.1	6,447.0	43.7	46.6	90.00	2,059.5	1,162.9	665.1	578.3	86.82	7.661	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
8,700.0	6,447.0	8,824.1	6,447.0	45.5	48.2	90.00	2,159.4	1,162.8	664.2	573.8	90.42	7.346	
8,800.0	6,447.0	8,924.1	6,447.0	47.3	49.9	90.00	2,259.4	1,162.6	663.4	569.3	94.04	7.054	
8,900.0	6,447.0	9,024.1	6,447.0	49.1	51.6	90.00	2,359.4	1,162.5	662.5	564.8	97.68	6.783	
9,000.0	6,447.0	9,124.1	6,447.0	50.9	53.3	90.00	2,459.4	1,162.3	661.6	560.3	101.33	6.530	
9,100.0	6,447.0	9,224.1	6,447.0	52.7	55.1	90.00	2,559.4	1,162.2	660.8	555.8	104.99	6.294	
9,200.0	6,447.0	9,324.1	6,447.0	54.6	56.8	90.00	2,659.4	1,162.1	659.9	551.2	108.67	6.073	
9,300.0	6,447.0	9,424.1	6,447.0	56.4	58.6	90.00	2,759.4	1,161.9	659.0	546.7	112.36	5.866	
9,400.0	6,447.0	9,524.1	6,447.0	58.2	60.4	90.00	2,859.4	1,161.8	658.2	542.1	116.05	5.671	
9,500.0	6,447.0	9,624.1	6,447.0	60.1	62.1	90.00	2,959.4	1,161.7	657.3	537.5	119.76	5.488	
9,600.0	6,447.0	9,724.1	6,447.0	61.9	63.9	90.00	3,059.4	1,161.5	656.4	533.0	123.47	5.316	
9,700.0	6,447.0	9,824.1	6,447.0	63.8	65.7	90.00	3,159.4	1,161.4	655.6	528.4	127.20	5.154	
9,800.0	6,447.0	9,924.1	6,447.0	65.7	67.5	90.00	3,259.4	1,161.3	654.7	523.8	130.92	5.001	
9,900.0	6,447.0	10,024.1	6,447.0	67.5	69.3	90.00	3,359.4	1,161.1	653.8	519.2	134.66	4.855	
10,000.0	6,447.0	10,124.1	6,447.0	69.4	71.1	90.00	3,459.4	1,161.0	653.0	514.6	138.40	4.718	
10,100.0	6,447.0	10,224.1	6,447.0	71.3	73.0	90.00	3,559.4	1,160.8	652.1	510.0	142.15	4.588	
10,200.0	6,447.0	10,324.1	6,447.0	73.1	74.8	90.00	3,659.4	1,160.7	651.2	505.3	145.90	4.464	
10,300.0	6,447.0	10,424.1	6,447.0	75.0	76.6	90.00	3,759.4	1,160.6	650.4	500.7	149.65	4.346	
10,400.0	6,447.0	10,524.1	6,447.0	76.9	78.5	90.00	3,859.4	1,160.4	649.5	496.1	153.41	4.234	
10,500.0	6,447.0	10,624.1	6,447.0	78.8	80.3	90.00	3,959.4	1,160.3	648.6	491.5	157.17	4.127	
10,600.0	6,447.0	10,724.1	6,447.0	80.6	82.1	90.00	4,059.4	1,160.2	647.8	486.8	160.94	4.025	
10,700.0	6,447.0	10,824.1	6,447.0	82.5	84.0	90.00	4,159.4	1,160.0	646.9	482.2	164.71	3.928	
10,800.0	6,447.0	10,924.1	6,447.0	84.4	85.8	90.00	4,259.4	1,159.9	646.0	477.6	168.48	3.834	
10,900.0	6,447.0	11,024.1	6,447.0	86.3	87.7	90.00	4,359.4	1,159.8	645.2	472.9	172.26	3.745	
11,000.0	6,447.0	11,124.1	6,447.0	88.2	89.5	90.00	4,459.4	1,159.6	644.3	468.3	176.04	3.660	
11,048.0	6,447.0	11,172.1	6,447.0	89.1	90.4	90.00	4,507.4	1,159.6	643.9	466.0	177.85	3.620 SF	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 T-P-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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	-43.73	29.1	-27.9	40.3				
100.0	100.0	100.0	100.0	0.1	0.1	-43.73	29.1	-27.9	40.3	40.1	0.22	179.438	
200.0	200.0	200.0	200.0	0.3	0.3	-43.73	29.1	-27.9	40.3	39.7	0.67	59.813	
300.0	300.0	300.0	300.0	0.6	0.6	-43.73	29.1	-27.9	40.3	39.2	1.12	35.888	
400.0	400.0	400.0	400.0	0.8	0.8	-43.73	29.1	-27.9	40.3	38.8	1.57	25.634	
500.0	500.0	500.0	500.0	1.0	1.0	-43.73	29.1	-27.9	40.3	38.3	2.02	19.938	
600.0	600.0	600.0	600.0	1.2	1.2	-43.73	29.1	-27.9	40.3	37.9	2.47	16.313	
700.0	700.0	700.0	700.0	1.5	1.5	-43.73	29.1	-27.9	40.3	37.4	2.92	13.803	
800.0	800.0	800.0	800.0	1.7	1.7	-43.73	29.1	-27.9	40.3	37.0	3.37	11.963	
900.0	900.0	900.0	900.0	1.9	1.9	-43.73	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	-43.73	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	-43.73	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	-43.73	29.1	-27.9	40.3	35.2	5.17	7.802	CC, ES
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-165.88	29.1	-27.9	42.0	36.4	5.60	7.509	
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	-167.41	29.1	-27.9	47.1	41.1	6.00	7.850	
1,500.0	1,499.5	1,499.5	1,499.5	3.2	3.3	-169.33	29.1	-27.9	55.7	49.2	6.41	8.688	
1,600.0	1,598.7	1,598.7	1,598.7	3.4	3.5	-171.20	29.1	-27.9	67.7	60.9	6.81	9.940	
1,682.6	1,680.3	1,682.5	1,682.4	3.6	3.7	-172.31	28.7	-26.8	79.1	72.0	7.12	11.106	
1,700.0	1,697.5	1,700.2	1,700.2	3.7	3.7	-172.46	28.5	-26.2	81.5	74.3	7.20	11.327	
1,800.0	1,796.1	1,802.5	1,802.3	3.9	3.9	-172.78	26.7	-21.2	93.2	85.6	7.59	12.270	
1,900.0	1,894.6	1,905.4	1,904.9	4.2	4.1	-172.37	23.5	-12.6	101.5	93.5	8.01	12.672	
2,000.0	1,993.2	2,008.8	2,007.5	4.6	4.3	-171.36	19.1	-0.5	106.4	98.0	8.44	12.609	
2,100.0	2,091.8	2,112.4	2,109.7	4.9	4.6	-169.74	13.4	15.0	108.0	99.1	8.89	12.149	
2,200.0	2,190.4	2,215.9	2,211.2	5.2	4.9	-167.38	6.4	34.0	106.3	96.9	9.36	11.355	
2,300.0	2,289.0	2,319.0	2,311.5	5.6	5.2	-164.03	-1.9	56.3	101.6	91.7	9.88	10.285	
2,400.0	2,387.6	2,420.6	2,409.5	5.9	5.6	-159.35	-11.1	81.5	94.3	83.9	10.46	9.015	
2,500.0	2,486.2	2,519.9	2,505.0	6.3	6.1	-153.70	-20.5	106.9	87.1	75.9	11.13	7.822	
2,600.0	2,584.7	2,619.3	2,600.6	6.6	6.5	-147.12	-29.8	132.3	80.8	68.9	11.92	6.779	
2,700.0	2,683.3	2,718.6	2,696.2	7.0	7.0	-139.56	-39.2	157.7	75.8	63.0	12.86	5.897	
2,800.0	2,781.9	2,817.9	2,791.8	7.4	7.4	-131.12	-48.5	183.0	72.3	58.4	13.93	5.191	
2,900.0	2,880.5	2,917.3	2,887.4	7.7	7.9	-122.04	-57.8	208.4	70.5	55.4	15.09	4.673	
2,946.4	2,926.2	2,963.3	2,931.7	7.9	8.2	-117.73	-62.2	220.2	70.3	54.7	15.64	4.496	
3,000.0	2,979.1	3,016.6	2,982.9	8.1	8.5	-112.75	-67.2	233.8	70.6	54.3	16.26	4.340	
3,100.0	3,077.7	3,115.9	3,078.5	8.5	9.0	-103.70	-76.5	259.2	72.5	55.1	17.36	4.176	
3,200.0	3,176.2	3,215.3	3,174.1	8.9	9.5	-95.32	-85.9	284.6	76.1	57.8	18.33	4.153	
3,300.0	3,274.8	3,314.6	3,269.7	9.3	10.0	-87.83	-95.2	310.0	81.2	62.1	19.17	4.238	
3,400.0	3,373.4	3,413.9	3,365.3	9.6	10.6	-81.32	-104.6	335.3	87.6	67.7	19.89	4.403	
3,500.0	3,472.0	3,513.3	3,460.9	10.0	11.1	-75.73	-113.9	360.7	94.9	74.4	20.53	4.623	
3,600.0	3,570.6	3,612.6	3,556.4	10.4	11.7	-70.98	-123.2	386.1	103.0	81.9	21.11	4.879	
3,700.0	3,669.2	3,711.9	3,652.0	10.8	12.2	-66.94	-132.6	411.5	111.7	90.0	21.65	5.156	
3,800.0	3,767.8	3,811.3	3,747.6	11.2	12.8	-63.50	-141.9	436.9	120.8	98.6	22.18	5.446	
3,900.0	3,866.3	3,910.6	3,843.2	11.6	13.3	-60.55	-151.3	462.3	130.3	107.6	22.71	5.741	
4,000.0	3,964.9	4,010.0	3,938.8	11.9	13.9	-58.00	-160.6	487.6	140.2	116.9	23.23	6.035	
4,100.0	4,063.5	4,109.3	4,034.4	12.3	14.4	-55.79	-170.0	513.0	150.2	126.5	23.75	6.326	
4,200.0	4,162.1	4,208.6	4,129.9	12.7	15.0	-53.86	-179.3	538.4	160.5	136.2	24.27	6.612	
4,300.0	4,260.7	4,308.0	4,225.5	13.1	15.6	-52.16	-188.7	563.8	170.9	146.1	24.81	6.890	
4,400.0	4,359.3	4,407.3	4,321.1	13.5	16.1	-50.66	-198.0	589.2	181.5	156.1	25.34	7.160	
4,500.0	4,457.8	4,506.6	4,416.7	13.9	16.7	-49.32	-207.3	614.5	192.1	166.2	25.89	7.422	
4,562.8	4,519.7	4,569.0	4,476.7	14.1	17.0	-48.56	-213.2	630.5	198.9	172.6	26.23	7.582	
4,600.0	4,556.5	4,605.9	4,512.2	14.2	17.3	-48.14	-216.7	639.9	203.0	176.6	26.42	7.687	
4,700.0	4,655.5	4,704.9	4,607.5	14.5	17.8	-46.67	-226.0	665.2	216.0	189.2	26.78	8.064	
4,800.0	4,755.0	4,803.4	4,702.2	14.7	18.4	-44.80	-235.3	690.4	231.5	204.4	27.02	8.567	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 T-P-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
4,900.0	4,854.7	4,901.2	4,796.3	14.9	19.0	-42.69	-244.5	715.4	249.8	222.6	27.15	9.199	
5,000.0	4,954.7	5,004.8	4,896.3	15.1	19.5	-40.38	-253.8	740.9	270.2	243.0	27.18	9.940	
5,045.3	5,000.0	5,053.0	4,943.1	15.2	19.7	82.16	-257.8	751.6	279.4	252.2	27.25	10.255	
5,100.0	5,054.7	5,111.5	5,000.2	15.2	19.9	83.37	-262.2	763.6	290.1	262.8	27.26	10.644	
5,200.0	5,154.7	5,219.9	5,106.6	15.4	20.3	85.14	-269.4	783.0	307.3	280.0	27.35	11.237	
5,300.0	5,254.7	5,329.7	5,215.1	15.5	20.6	86.42	-275.2	798.8	321.3	293.8	27.52	11.675	
5,400.0	5,354.7	5,440.7	5,325.3	15.7	20.8	87.31	-279.6	810.8	331.9	304.1	27.75	11.959	
5,500.0	5,454.7	5,552.5	5,436.8	15.8	21.1	87.87	-282.5	818.9	339.0	310.9	28.03	12.091	
5,600.0	5,554.7	5,664.8	5,549.0	16.0	21.2	88.14	-284.0	822.8	342.4	314.1	28.35	12.079	
5,700.0	5,654.7	5,770.4	5,654.7	16.2	21.4	88.17	-284.2	823.2	342.8	314.1	28.69	11.948	
5,750.9	5,705.6	5,821.3	5,705.6	16.2	21.4	88.17	-284.2	823.2	342.8	313.9	28.86	11.876	
5,800.0	5,754.7	5,869.6	5,753.9	16.3	21.5	88.00	-283.1	823.2	342.8	313.8	29.05	11.801	
5,900.0	5,854.7	5,964.8	5,847.7	16.5	21.5	85.57	-268.6	823.3	343.8	314.0	29.72	11.566	
5,945.6	5,900.2	6,005.8	5,887.1	16.5	21.5	83.66	-257.0	823.3	345.1	314.9	30.14	11.450	
5,950.0	5,904.7	6,009.7	5,890.8	16.5	21.5	83.02	-255.8	823.3	345.2	315.1	30.11	11.466	
6,000.0	5,954.6	6,053.0	5,931.1	16.6	21.5	80.56	-240.0	823.4	347.5	316.9	30.62	11.349	
6,050.0	6,004.0	6,095.4	5,969.1	16.7	21.5	78.22	-221.4	823.4	350.3	319.2	31.03	11.287	
6,100.0	6,052.4	6,136.9	6,004.8	16.7	21.5	76.00	-200.2	823.5	353.5	322.1	31.33	11.282	
6,150.0	6,099.5	6,177.7	6,038.2	16.7	21.5	73.92	-176.7	823.6	356.9	325.4	31.49	11.333	
6,200.0	6,144.7	6,217.9	6,069.1	16.7	21.4	72.00	-151.0	823.7	360.6	329.1	31.52	11.440	
6,250.0	6,187.6	6,257.5	6,097.5	16.7	21.4	70.24	-123.5	823.7	364.3	332.9	31.41	11.599	
6,300.0	6,228.0	6,300.0	6,125.6	16.6	21.3	68.54	-91.6	823.9	367.9	336.8	31.18	11.801	
6,350.0	6,265.2	6,335.2	6,146.9	16.6	21.3	67.22	-63.5	823.9	371.4	340.5	30.85	12.037	
6,400.0	6,299.2	6,373.6	6,167.8	16.5	21.3	65.98	-31.4	824.1	374.6	344.1	30.48	12.292	
6,450.0	6,329.4	6,411.6	6,186.2	16.5	21.2	64.91	1.9	824.2	377.5	347.4	30.09	12.546	
6,500.0	6,355.8	6,450.0	6,202.2	16.4	21.2	64.01	36.8	824.3	380.0	350.2	29.75	12.774	
6,550.0	6,377.9	6,486.9	6,215.2	16.4	21.2	63.31	71.3	824.4	382.0	352.5	29.50	12.949	
6,600.0	6,395.6	6,526.1	6,226.3	16.4	21.2	62.77	108.9	824.5	383.5	354.1	29.40	13.046	
6,627.4	6,403.4	6,553.5	6,233.3	16.4	21.2	62.64	135.4	824.6	383.8	354.3	29.46	13.026	
6,698.0	6,421.6	6,622.8	6,251.3	16.4	21.2	62.62	202.3	824.8	383.5	353.5	30.06	12.758	
6,700.0	6,422.2	6,624.3	6,251.6	16.4	21.2	62.62	203.8	824.8	383.6	353.5	30.08	12.753	
6,727.4	6,429.3	6,644.7	6,256.3	16.5	21.2	62.53	223.7	824.9	383.8	353.5	30.31	12.664	
6,750.0	6,434.6	6,661.6	6,259.6	16.5	21.2	62.39	240.2	824.9	384.2	353.7	30.49	12.602	
6,800.0	6,443.1	6,700.0	6,265.1	16.7	21.3	62.20	278.2	825.1	384.7	353.6	31.03	12.396	
6,850.0	6,446.8	6,736.0	6,267.6	17.0	21.4	62.20	314.1	825.2	384.5	352.7	31.77	12.101	
6,863.8	6,447.0	6,750.0	6,268.0	17.1	21.4	62.24	328.1	825.2	384.4	352.4	32.04	11.996	
6,900.0	6,447.0	6,779.4	6,268.0	17.4	21.5	62.23	357.5	825.3	384.2	351.6	32.60	11.786	
7,000.0	6,447.0	6,879.4	6,268.0	18.4	21.9	62.20	457.5	825.7	383.9	349.4	34.46	11.140	
7,100.0	6,447.0	6,979.4	6,268.0	19.5	22.6	62.18	557.5	826.0	383.5	347.0	36.54	10.495	
7,200.0	6,447.0	7,079.4	6,268.0	20.8	23.4	62.15	657.5	826.3	383.1	344.3	38.82	9.869	
7,300.0	6,447.0	7,179.4	6,268.0	22.1	24.4	62.12	757.5	826.6	382.8	341.5	41.27	9.276	
7,400.0	6,447.0	7,279.4	6,268.0	23.6	25.6	62.09	857.5	827.0	382.4	338.6	43.85	8.722	
7,500.0	6,447.0	7,379.4	6,268.0	25.1	26.9	62.06	957.5	827.3	382.1	335.5	46.54	8.209	
7,600.0	6,447.0	7,479.4	6,268.0	26.6	28.2	62.04	1,057.5	827.6	381.7	332.4	49.33	7.738	
7,700.0	6,447.0	7,579.4	6,268.0	28.2	29.7	62.01	1,157.5	828.0	381.4	329.2	52.19	7.307	
7,800.0	6,447.0	7,679.4	6,268.0	29.8	31.2	61.98	1,257.5	828.3	381.0	325.9	55.13	6.912	
7,900.0	6,447.0	7,779.4	6,268.0	31.5	32.7	61.95	1,357.5	828.6	380.7	322.5	58.11	6.550	
8,000.0	6,447.0	7,879.4	6,268.0	33.2	34.3	61.92	1,457.5	829.0	380.3	319.2	61.15	6.220	
8,100.0	6,447.0	7,979.4	6,268.0	34.9	35.9	61.89	1,557.5	829.3	380.0	315.7	64.22	5.916	
8,200.0	6,447.0	8,079.3	6,268.0	36.6	37.6	61.86	1,657.5	829.6	379.6	312.3	67.33	5.638	
8,300.0	6,447.0	8,179.3	6,268.0	38.3	39.3	61.84	1,757.5	829.9	379.2	308.8	70.47	5.382	
8,400.0	6,447.0	8,279.3	6,268.0	40.1	41.0	61.81	1,857.5	830.3	378.9	305.3	73.64	5.145	

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 T-P-2HNB - Wellbore #1 - Plan #1 (11-12-13)

Offset Site Error: 0.0 ft

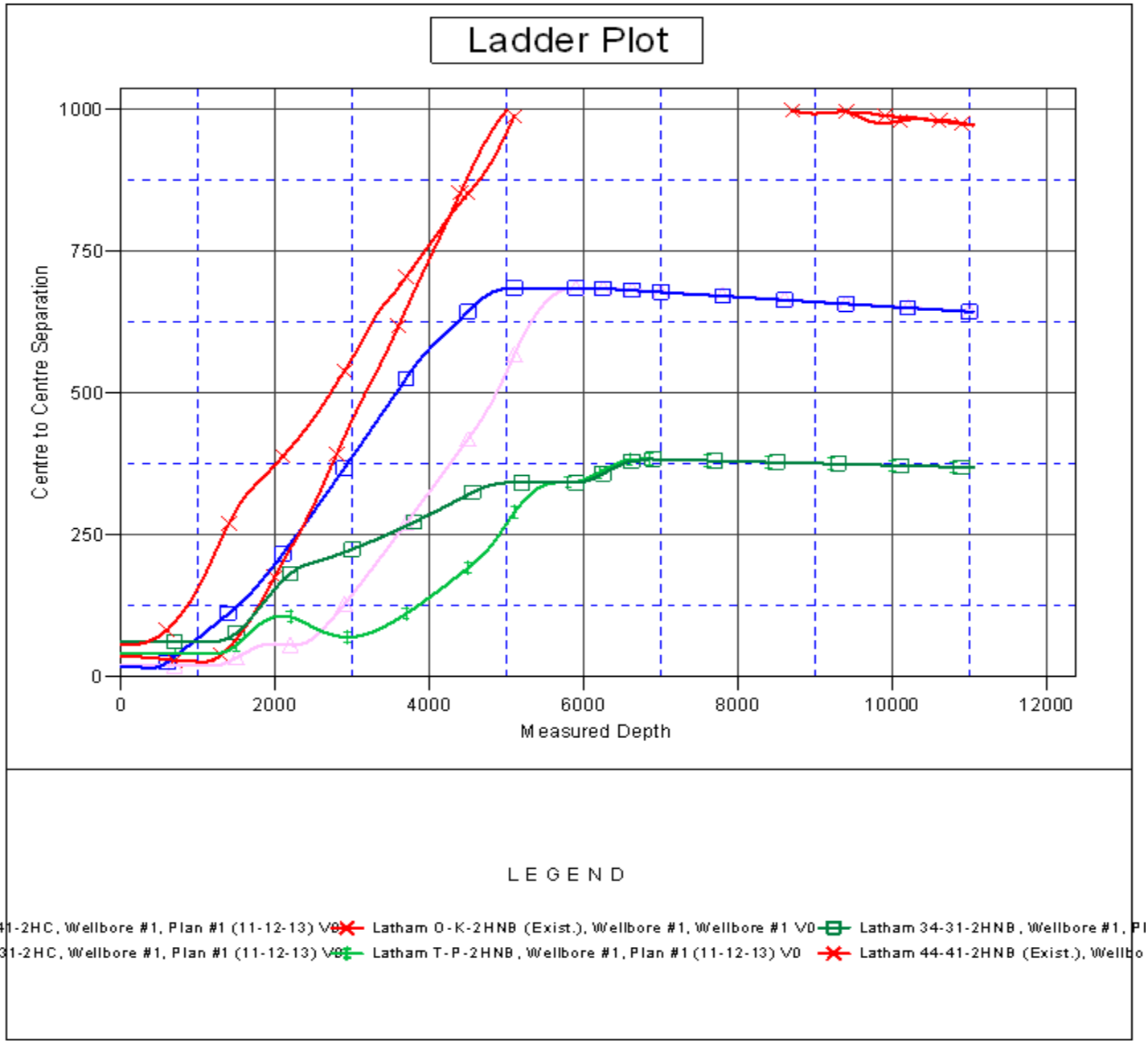
Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis 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
8,500.0	6,447.0	8,379.3	6,268.0	41.9	42.7	61.78	1,957.5	830.6	378.5	301.7	76.82	4.927	
8,600.0	6,447.0	8,479.3	6,268.0	43.7	44.4	61.75	2,057.5	830.9	378.2	298.2	80.03	4.726	
8,700.0	6,447.0	8,579.3	6,268.0	45.5	46.2	61.72	2,157.5	831.3	377.8	294.6	83.25	4.538	
8,800.0	6,447.0	8,679.3	6,268.0	47.3	47.9	61.69	2,257.4	831.6	377.5	291.0	86.49	4.364	
8,900.0	6,447.0	8,779.3	6,268.0	49.1	49.7	61.66	2,357.4	831.9	377.1	287.4	89.75	4.202	
9,000.0	6,447.0	8,879.3	6,268.0	50.9	51.5	61.63	2,457.4	832.2	376.8	283.8	93.01	4.051	
9,100.0	6,447.0	8,979.3	6,268.0	52.7	53.3	61.61	2,557.4	832.6	376.4	280.1	96.28	3.909	
9,200.0	6,447.0	9,079.3	6,268.0	54.6	55.1	61.58	2,657.4	832.9	376.1	276.5	99.57	3.777	
9,300.0	6,447.0	9,179.3	6,268.0	56.4	56.9	61.55	2,757.4	833.2	375.7	272.9	102.86	3.653	
9,400.0	6,447.0	9,279.3	6,268.0	58.2	58.7	61.52	2,857.4	833.6	375.4	269.2	106.15	3.536	
9,500.0	6,447.0	9,379.3	6,268.0	60.1	60.5	61.49	2,957.4	833.9	375.0	265.5	109.46	3.426	
9,600.0	6,447.0	9,479.3	6,268.0	61.9	62.4	61.46	3,057.4	834.2	374.7	261.9	112.77	3.322	
9,700.0	6,447.0	9,579.3	6,268.0	63.8	64.2	61.43	3,157.4	834.5	374.3	258.2	116.08	3.224	
9,800.0	6,447.0	9,679.3	6,268.0	65.7	66.0	61.40	3,257.4	834.9	373.9	254.5	119.40	3.132	
9,900.0	6,447.0	9,779.3	6,268.0	67.5	67.9	61.37	3,357.4	835.2	373.6	250.9	122.73	3.044	
10,000.0	6,447.0	9,879.3	6,268.0	69.4	69.7	61.34	3,457.4	835.5	373.2	247.2	126.05	2.961	
10,100.0	6,447.0	9,979.3	6,268.0	71.3	71.6	61.31	3,557.4	835.9	372.9	243.5	129.38	2.882	
10,200.0	6,447.0	10,079.3	6,268.0	73.1	73.4	61.28	3,657.4	836.2	372.5	239.8	132.72	2.807	
10,300.0	6,447.0	10,179.3	6,268.0	75.0	75.3	61.25	3,757.4	836.5	372.2	236.1	136.05	2.736	
10,400.0	6,447.0	10,279.3	6,268.0	76.9	77.1	61.22	3,857.4	836.8	371.8	232.5	139.39	2.668	
10,500.0	6,447.0	10,379.3	6,268.0	78.8	79.0	61.19	3,957.4	837.2	371.5	228.8	142.73	2.603	
10,600.0	6,447.0	10,479.3	6,268.0	80.6	80.9	61.16	4,057.4	837.5	371.1	225.1	146.07	2.541	
10,700.0	6,447.0	10,579.3	6,268.0	82.5	82.7	61.13	4,157.4	837.8	370.8	221.4	149.41	2.482	
10,800.0	6,447.0	10,679.3	6,268.0	84.4	84.6	61.10	4,257.4	838.2	370.4	217.7	152.75	2.425	
10,900.0	6,447.0	10,779.3	6,268.0	86.3	86.5	61.07	4,357.4	838.5	370.1	214.0	156.09	2.371	
11,000.0	6,447.0	10,879.3	6,268.0	88.2	88.3	61.04	4,457.4	838.8	369.7	210.3	159.44	2.319	
11,048.0	6,447.0	10,927.4	6,268.0	89.1	89.2	61.03	4,505.4	839.0	369.6	208.5	161.04	2.295	SF

Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 Depths are relative to WELL @ 4533.0ft (RKB - 13')	Coordinates are relative to: Latham T34-P31-2HC
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°



Company:	BONANZA CREEK ENERGY OPERATING	**Local Co-ordinate Reference:**	Well Latham T34-P31-2HC
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 T34-P31-2HC	**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 Depths are relative to WELL @ 4533.0ft (RKB - 13')	Coordinates are relative to: Latham T34-P31-2HC
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°