

BONANZA CREEK ENERGY OPERATING

Well Name: **Latham P-T-1HZ**

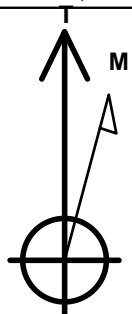
Surface Location: Latham P-T-1HZ Pad Sec.1-T4N-R63W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4549.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1371317.36	3312333.24	40.347250	-104.379400	
Original Well Elev WELL @ 4561.0ft (Original Well Elev)						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HARDLINE BHL 460'FSL	1.0	-4251.4	-689.9	Polygon
HARDLINE SHL 460'FNL	1.0	202.9	-774.9	Polygon
BHL 460'FSL, 1000'FEL	6301.0	-4251.5	-289.9	Point
T1 460'FNL, 900'FEL	6301.0	200.4	-362.4	Point



Azimuths to True North
Magnetic North: 8.51°

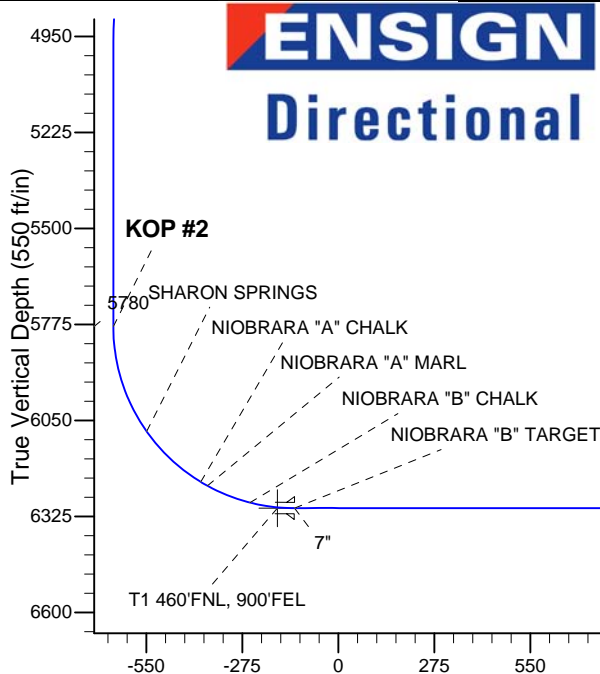
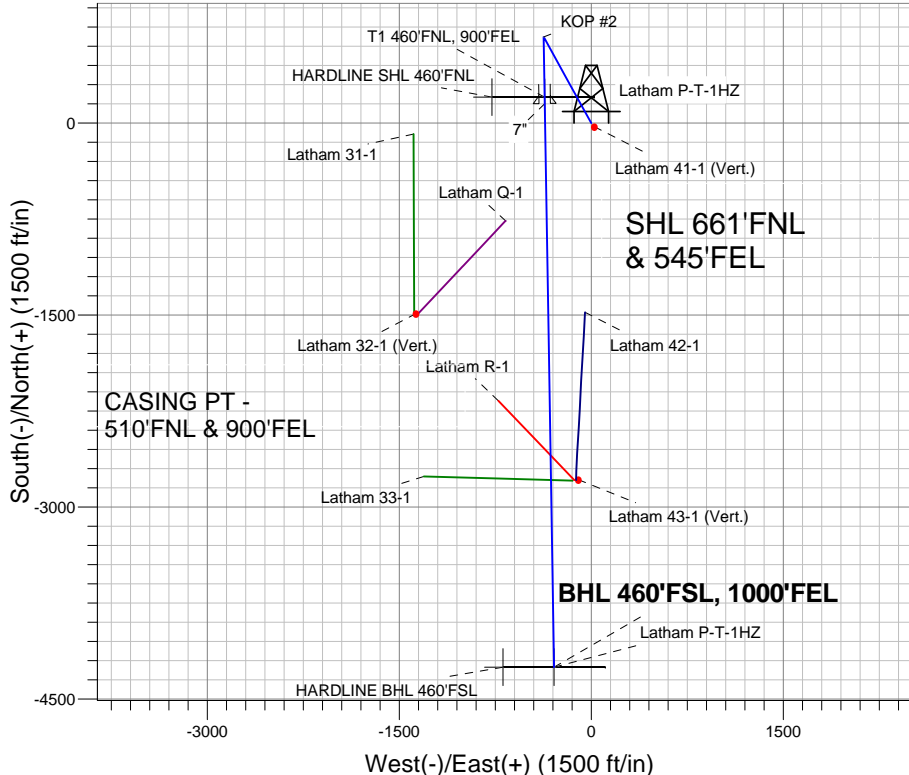
Magnetic Field
Strength: 53039.8nT
Dip Angle: 67.04°
Date: 6/20/2012
Model: IGRF2010

Latham P-T-1HZ Pad Sec.1-T4N-R63W
Latham P-T-1HZ
Plan #1 (6-15-12)
8:49, June 21 2012

ANNOTATIONS

TVD	MD	Annotation
600.0	600.0	KOP #1
5780.1	5852.5	KOP #2

South(-)/North(+) (1500 ft/in)



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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1166.3	11.33	331.08	1162.7	48.8	-27.0	2.00	331.08	-46.9	
4	4506.1	11.33	331.08	4437.3	623.0	-344.2	0.00	0.00	-598.1	
5	5072.4	0.00	0.00	5000.0	671.8	-371.2	2.00	180.00	-645.0	
6	5852.5	0.00	0.00	5780.1	671.8	-371.2	0.00	0.00	-645.0	
7	6670.7	90.00	179.05	6301.0	151.0	-362.6	11.00	179.05	-126.0	
8	11073.8	90.00	179.05	6301.0	-4251.5	-289.9	0.00	0.00	4261.3	BHL 460'FSL, 1000'FEL

BHL 460'FSL, 1000'FEL

Vertical Section at 183.90° (550 ft/in)



BONANZA CREEK ENERGY OPERATING

SEC.1-T4N-R63W

Latham P-T-1HZ Pad Sec.1-T4N-R63W

Latham P-T-1HZ

Wellbore #1

Plan: Plan #1 (6-15-12)

Standard Planning Report

21 June, 2012

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,166.3	11.33	331.08	1,162.7	48.8	-27.0	2.00	2.00	0.00	331.08	
4,506.1	11.33	331.08	4,437.3	623.0	-344.2	0.00	0.00	0.00	0.00	
5,072.4	0.00	0.00	5,000.0	671.8	-371.2	2.00	-2.00	0.00	180.00	
5,852.5	0.00	0.00	5,780.1	671.8	-371.2	0.00	0.00	0.00	0.00	
6,670.7	90.00	179.05	6,301.0	151.0	-362.6	11.00	11.00	0.00	179.05	
11,073.8	90.00	179.05	6,301.0	-4,251.5	-289.9	0.00	0.00	0.00	0.00	BHL 460'FSL, 1000

Database:	Landmark	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Project:	SEC.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	North Reference:	True
Well:	Latham P-T-1HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-15-12)		

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
HARDLINE SHL 460°FNL - HARDLINE BHL 460°FSL									
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
KOP #1									
700.0	2.00	331.08	700.0	1.5	-0.8	-1.5	2.00	2.00	0.00
800.0	4.00	331.08	799.8	6.1	-3.4	-5.9	2.00	2.00	0.00
900.0	6.00	331.08	899.5	13.7	-7.6	-13.2	2.00	2.00	0.00
1,000.0	8.00	331.08	998.7	24.4	-13.5	-23.4	2.00	2.00	0.00
1,100.0	10.00	331.08	1,097.5	38.1	-21.0	-36.6	2.00	2.00	0.00
1,166.3	11.33	331.08	1,162.7	48.8	-27.0	-46.9	2.00	2.00	0.00
1,200.0	11.33	331.08	1,195.7	54.6	-30.2	-52.4	0.00	0.00	0.00
1,300.0	11.33	331.08	1,293.7	71.8	-39.7	-68.9	0.00	0.00	0.00
1,400.0	11.33	331.08	1,391.8	89.0	-49.2	-85.5	0.00	0.00	0.00
1,500.0	11.33	331.08	1,489.8	106.2	-58.7	-102.0	0.00	0.00	0.00
1,600.0	11.33	331.08	1,587.9	123.4	-68.2	-118.5	0.00	0.00	0.00
1,700.0	11.33	331.08	1,685.9	140.6	-77.7	-135.0	0.00	0.00	0.00
1,800.0	11.33	331.08	1,784.0	157.8	-87.2	-151.5	0.00	0.00	0.00
1,900.0	11.33	331.08	1,882.0	175.0	-96.7	-168.0	0.00	0.00	0.00
2,000.0	11.33	331.08	1,980.1	192.2	-106.2	-184.5	0.00	0.00	0.00
2,100.0	11.33	331.08	2,078.1	209.3	-115.7	-201.0	0.00	0.00	0.00
2,200.0	11.33	331.08	2,176.2	226.5	-125.2	-217.5	0.00	0.00	0.00
2,300.0	11.33	331.08	2,274.2	243.7	-134.7	-234.0	0.00	0.00	0.00
2,400.0	11.33	331.08	2,372.3	260.9	-144.2	-250.5	0.00	0.00	0.00
2,500.0	11.33	331.08	2,470.3	278.1	-153.7	-267.0	0.00	0.00	0.00
2,600.0	11.33	331.08	2,568.4	295.3	-163.2	-283.5	0.00	0.00	0.00
2,700.0	11.33	331.08	2,666.4	312.5	-172.7	-300.0	0.00	0.00	0.00
2,800.0	11.33	331.08	2,764.5	329.7	-182.2	-316.5	0.00	0.00	0.00
2,900.0	11.33	331.08	2,862.6	346.9	-191.7	-333.0	0.00	0.00	0.00
3,000.0	11.33	331.08	2,960.6	364.1	-201.2	-349.5	0.00	0.00	0.00
3,100.0	11.33	331.08	3,058.7	381.2	-210.7	-366.0	0.00	0.00	0.00
3,200.0	11.33	331.08	3,156.7	398.4	-220.2	-382.5	0.00	0.00	0.00
3,300.0	11.33	331.08	3,254.8	415.6	-229.7	-399.0	0.00	0.00	0.00
3,321.7	11.33	331.08	3,276.0	419.4	-231.7	-402.6	0.00	0.00	0.00
PARKMAN									
3,400.0	11.33	331.08	3,352.8	432.8	-239.2	-415.5	0.00	0.00	0.00
3,500.0	11.33	331.08	3,450.9	450.0	-248.7	-432.1	0.00	0.00	0.00
3,600.0	11.33	331.08	3,548.9	467.2	-258.2	-448.6	0.00	0.00	0.00
3,700.0	11.33	331.08	3,647.0	484.4	-267.6	-465.1	0.00	0.00	0.00
3,800.0	11.33	331.08	3,745.0	501.6	-277.1	-481.6	0.00	0.00	0.00
3,900.0	11.33	331.08	3,843.1	518.8	-286.6	-498.1	0.00	0.00	0.00
4,000.0	11.33	331.08	3,941.1	536.0	-296.1	-514.6	0.00	0.00	0.00
4,061.1	11.33	331.08	4,001.0	546.5	-301.9	-524.7	0.00	0.00	0.00
SUSSEX									
4,100.0	11.33	331.08	4,039.2	553.2	-305.6	-531.1	0.00	0.00	0.00
4,200.0	11.33	331.08	4,137.2	570.3	-315.1	-547.6	0.00	0.00	0.00
4,300.0	11.33	331.08	4,235.3	587.5	-324.6	-564.1	0.00	0.00	0.00
4,400.0	11.33	331.08	4,333.3	604.7	-334.1	-580.6	0.00	0.00	0.00
4,500.0	11.33	331.08	4,431.4	621.9	-343.6	-597.1	0.00	0.00	0.00

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Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	North Reference:	True
Well:	Latham P-T-1HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-15-12)		

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)
4,506.1	11.33	331.08	4,437.3	623.0	-344.2	-598.1	0.00	0.00	0.00
4,600.0	9.45	331.08	4,529.7	637.8	-352.4	-612.3	2.00	-2.00	0.00
4,700.0	7.45	331.08	4,628.6	650.6	-359.5	-624.7	2.00	-2.00	0.00
4,800.0	5.45	331.08	4,728.0	660.5	-364.9	-634.1	2.00	-2.00	0.00
4,900.0	3.45	331.08	4,827.7	667.3	-368.7	-640.6	2.00	-2.00	0.00
5,000.0	1.45	331.08	4,927.6	671.0	-370.8	-644.2	2.00	-2.00	0.00
5,072.4	0.00	0.00	5,000.0	671.8	-371.2	-645.0	2.00	-2.00	0.00
5,100.0	0.00	0.00	5,027.6	671.8	-371.2	-645.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,127.6	671.8	-371.2	-645.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,227.6	671.8	-371.2	-645.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,327.6	671.8	-371.2	-645.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,427.6	671.8	-371.2	-645.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,527.6	671.8	-371.2	-645.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,627.6	671.8	-371.2	-645.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,727.6	671.8	-371.2	-645.0	0.00	0.00	0.00
5,852.5	0.00	0.00	5,780.1	671.8	-371.2	-645.0	0.00	0.00	0.00
KOP #2									
5,900.0	5.22	179.05	5,827.5	669.6	-371.2	-642.8	10.99	10.99	0.00
6,000.0	16.22	179.05	5,925.6	651.1	-370.9	-624.3	11.00	11.00	0.00
6,100.0	27.22	179.05	6,018.4	614.1	-370.2	-587.5	11.00	11.00	0.00
6,173.3	35.28	179.05	6,081.0	576.1	-369.6	-549.6	11.00	11.00	0.00
SHARON SPRINGS									
6,200.0	38.22	179.05	6,102.4	560.2	-369.4	-533.7	11.00	11.00	0.00
6,300.0	49.22	179.05	6,174.5	491.2	-368.2	-465.0	11.00	11.00	0.00
6,387.7	58.87	179.05	6,226.0	420.2	-367.0	-394.3	11.00	11.00	0.00
NIORARA "A" CHALK									
6,400.0	60.22	179.05	6,232.2	409.7	-366.9	-383.8	11.00	11.00	0.00
6,409.8	61.30	179.05	6,237.0	401.1	-366.7	-375.2	11.00	11.00	0.00
NIORARA "A" MARL									
6,500.0	71.22	179.05	6,273.3	318.7	-365.4	-293.1	11.00	11.00	0.00
6,541.3	75.76	179.05	6,285.0	279.1	-364.7	-253.6	11.00	11.00	0.00
NIORARA "B" CHALK									
6,600.0	82.22	179.05	6,296.2	221.5	-363.8	-196.2	11.00	11.00	0.00
6,621.4	84.58	179.05	6,298.7	200.2	-363.4	-175.0	11.00	11.00	0.00
T1 460'FNL, 900'FEL									
6,670.7	90.00	179.05	6,301.0	151.0	-362.6	-126.0	11.00	11.00	0.00
NIORARA "B" TARGET - 7"									
6,700.0	90.00	179.05	6,301.0	121.7	-362.1	-96.8	0.01	0.01	0.00
6,800.0	90.00	179.05	6,301.0	21.7	-360.5	2.8	0.00	0.00	0.00
6,900.0	90.00	179.05	6,301.0	-78.2	-358.8	102.5	0.00	0.00	0.00
7,000.0	90.00	179.05	6,301.0	-178.2	-357.2	202.1	0.00	0.00	0.00
7,100.0	90.00	179.05	6,301.0	-278.2	-355.5	301.8	0.00	0.00	0.00
7,200.0	90.00	179.05	6,301.0	-378.2	-353.9	401.4	0.00	0.00	0.00
7,300.0	90.00	179.05	6,301.0	-478.2	-352.2	501.0	0.00	0.00	0.00
7,400.0	90.00	179.05	6,301.0	-578.2	-350.6	600.7	0.00	0.00	0.00
7,500.0	90.00	179.05	6,301.0	-678.2	-348.9	700.3	0.00	0.00	0.00
7,600.0	90.00	179.05	6,301.0	-778.2	-347.3	800.0	0.00	0.00	0.00
7,700.0	90.00	179.05	6,301.0	-878.1	-345.6	899.6	0.00	0.00	0.00
7,800.0	90.00	179.05	6,301.0	-978.1	-344.0	999.3	0.00	0.00	0.00
7,900.0	90.00	179.05	6,301.0	-1,078.1	-342.3	1,098.9	0.00	0.00	0.00
8,000.0	90.00	179.05	6,301.0	-1,178.1	-340.7	1,198.5	0.00	0.00	0.00
8,100.0	90.00	179.05	6,301.0	-1,278.1	-339.0	1,298.2	0.00	0.00	0.00
8,200.0	90.00	179.05	6,301.0	-1,378.1	-337.4	1,397.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Project:	SEC.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	North Reference:	True
Well:	Latham P-T-1HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-15-12)		

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)
8,300.0	90.00	179.05	6,301.0	-1,478.1	-335.7	1,497.5	0.00	0.00	0.00
8,400.0	90.00	179.05	6,301.0	-1,578.0	-334.1	1,597.1	0.00	0.00	0.00
8,500.0	90.00	179.05	6,301.0	-1,678.0	-332.4	1,696.8	0.00	0.00	0.00
8,600.0	90.00	179.05	6,301.0	-1,778.0	-330.8	1,796.4	0.00	0.00	0.00
8,700.0	90.00	179.05	6,301.0	-1,878.0	-329.1	1,896.0	0.00	0.00	0.00
8,800.0	90.00	179.05	6,301.0	-1,978.0	-327.5	1,995.7	0.00	0.00	0.00
8,900.0	90.00	179.05	6,301.0	-2,078.0	-325.8	2,095.3	0.00	0.00	0.00
9,000.0	90.00	179.05	6,301.0	-2,178.0	-324.2	2,195.0	0.00	0.00	0.00
9,100.0	90.00	179.05	6,301.0	-2,277.9	-322.5	2,294.6	0.00	0.00	0.00
9,200.0	90.00	179.05	6,301.0	-2,377.9	-320.9	2,394.3	0.00	0.00	0.00
9,300.0	90.00	179.05	6,301.0	-2,477.9	-319.2	2,493.9	0.00	0.00	0.00
9,400.0	90.00	179.05	6,301.0	-2,577.9	-317.6	2,593.5	0.00	0.00	0.00
9,500.0	90.00	179.05	6,301.0	-2,677.9	-315.9	2,693.2	0.00	0.00	0.00
9,600.0	90.00	179.05	6,301.0	-2,777.9	-314.3	2,792.8	0.00	0.00	0.00
9,700.0	90.00	179.05	6,301.0	-2,877.9	-312.6	2,892.5	0.00	0.00	0.00
9,800.0	90.00	179.05	6,301.0	-2,977.9	-311.0	2,992.1	0.00	0.00	0.00
9,900.0	90.00	179.05	6,301.0	-3,077.8	-309.3	3,091.8	0.00	0.00	0.00
10,000.0	90.00	179.05	6,301.0	-3,177.8	-307.7	3,191.4	0.00	0.00	0.00
10,100.0	90.00	179.05	6,301.0	-3,277.8	-306.0	3,291.0	0.00	0.00	0.00
10,200.0	90.00	179.05	6,301.0	-3,377.8	-304.4	3,390.7	0.00	0.00	0.00
10,300.0	90.00	179.05	6,301.0	-3,477.8	-302.7	3,490.3	0.00	0.00	0.00
10,400.0	90.00	179.05	6,301.0	-3,577.8	-301.1	3,590.0	0.00	0.00	0.00
10,500.0	90.00	179.05	6,301.0	-3,677.8	-299.4	3,689.6	0.00	0.00	0.00
10,600.0	90.00	179.05	6,301.0	-3,777.7	-297.8	3,789.2	0.00	0.00	0.00
10,700.0	90.00	179.05	6,301.0	-3,877.7	-296.1	3,888.9	0.00	0.00	0.00
10,800.0	90.00	179.05	6,301.0	-3,977.7	-294.5	3,988.5	0.00	0.00	0.00
10,900.0	90.00	179.05	6,301.0	-4,077.7	-292.8	4,088.2	0.00	0.00	0.00
11,000.0	90.00	179.05	6,301.0	-4,177.7	-291.2	4,187.8	0.00	0.00	0.00
11,073.8	90.00	179.05	6,301.0	-4,251.5	-289.9	4,261.3	0.00	0.00	0.00
BHL 460°FSL, 1000°FEL									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
BHL 460°FSL, 1000°FEL - hit/miss target - Shape - Point	0.00	0.00	6,301.0	-4,251.5	-289.9	1,367,062.76	3,312,097.06	40.335580	-104.380440
T1 460°FNL, 900°FEL - plan misses target center by 2.6ft at 6621.4ft MD (6298.7 TVD, 200.2 N, -363.4 E) - Point	0.00	0.00	6,301.0	200.4	-362.4	1,371,513.14	3,311,968.39	40.347800	-104.380700
HARDLINE SHL 460°F - plan misses target center by 801.0ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E) - Polygon Point 1 Point 2	0.00	0.00	1.0	202.9	-774.9	1,371,510.40	3,311,555.85	40.347807	-104.382180
			1.0	0.0	0.0	1,371,510.40	3,311,555.85		
			1.0	0.0	800.0	1,371,520.51	3,312,355.76		
HARDLINE BHL 460°F - plan misses target center by 4307.1ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E) - Polygon Point 1 Point 2	0.00	0.00	1.0	-4,251.4	-689.9	1,367,057.73	3,311,697.13	40.335580	-104.381875
			1.0	0.0	0.0	1,367,057.73	3,311,697.13		
			1.0	0.0	800.0	1,367,067.84	3,312,497.03		

Database:	Landmark	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Project:	SEC.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	North Reference:	True
Well:	Latham P-T-1HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-15-12)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,670.7	6,301.0	7"	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,321.7	3,276.0	PARKMAN		0.00		
4,061.1	4,001.0	SUSSEX		0.00		
6,173.3	6,081.0	SHARON SPRINGS		0.00		
6,387.7	6,226.0	NIOBRARA "A" CHALK		0.00		
6,409.8	6,237.0	NIOBRARA "A" MARL		0.00		
6,541.3	6,285.0	NIOBRARA "B" CHALK		0.00		
6,670.7	6,301.0	NIOBRARA "B" TARGET		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
600.0	600.0	0.0	0.0	KOP #1	
5,852.5	5,780.1	671.8	-371.2	KOP #2	



BONANZA CREEK ENERGY OPERATING

SEC.1-T4N-R63W

Latham P-T-1HZ Pad Sec.1-T4N-R63W

Latham P-T-1HZ

Wellbore #1

Plan #1 (6-15-12)

Anticollision Report

21 June, 2012

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Project:	SEC.1-T4N-R63W	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Reference Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham P-T-1HZ	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 (6-15-12)	Offset TVD Reference:	Offset Datum

Offset Design Latham 32-1 (Vert.) Pad Sec.1-T4N-R63W - Latham Q-1 - Wellbore #1 - Plan #1 (5-30-12)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,600.0	6,301.0	6,392.9	6,297.0	24.3	23.1	90.00	-765.0	-669.0	322.0	278.4	43.63	7.381 SF	
7,700.0	6,301.0	6,392.9	6,297.0	25.8	23.1	90.00	-765.0	-669.0	342.6	297.5	45.11	7.595	
7,800.0	6,301.0	6,392.9	6,297.0	27.3	23.1	90.00	-765.0	-669.0	388.7	342.1	46.65	8.332	
7,900.0	6,301.0	6,392.9	6,297.0	28.9	23.1	90.00	-765.0	-669.0	452.5	404.3	48.24	9.381	
8,000.0	6,301.0	6,392.9	6,297.0	30.5	23.1	90.00	-765.0	-669.0	527.7	477.8	49.87	10.582	
8,100.0	6,301.0	6,392.9	6,297.0	32.2	23.1	90.00	-765.0	-669.0	610.1	558.5	51.53	11.839	
8,200.0	6,301.0	6,392.9	6,297.0	33.9	23.1	90.00	-765.0	-669.0	697.0	643.8	53.22	13.098	
8,300.0	6,301.0	6,392.9	6,297.0	35.6	23.1	90.00	-765.0	-669.0	787.1	732.2	54.93	14.329	
8,400.0	6,301.0	6,392.9	6,297.0	37.3	23.1	90.00	-765.0	-669.0	879.3	822.7	56.66	15.518	
8,500.0	6,301.0	6,392.9	6,297.0	39.1	23.1	90.00	-765.0	-669.0	973.1	914.7	58.42	16.658	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Project:	SEC.1-T4N-R63W	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Reference Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham P-T-1HZ	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 (6-15-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	139.29	-29.2	25.1	38.5					
100.0	100.0	99.0	99.0	0.1	0.1	139.29	-29.2	25.1	38.5	38.2	0.22	171.973		
200.0	200.0	199.0	199.0	0.3	0.3	139.29	-29.2	25.1	38.5	37.8	0.67	57.229		
300.0	300.0	299.0	299.0	0.6	0.6	139.29	-29.2	25.1	38.5	37.3	1.12	34.291		
400.0	400.0	399.0	399.0	0.8	0.8	139.29	-29.2	25.1	38.5	36.9	1.57	24.480		
500.0	500.0	499.0	499.0	1.0	1.0	139.29	-29.2	25.1	38.5	36.4	2.02	19.034		
600.0	600.0	599.0	599.0	1.2	1.2	139.29	-29.2	25.1	38.5	36.0	2.47	15.570 CC, ES		
700.0	700.0	699.0	699.0	1.5	1.5	168.71	-29.2	25.1	40.2	37.3	2.92	13.760		
800.0	799.8	798.8	798.8	1.7	1.7	169.99	-29.2	25.1	45.3	41.9	3.37	13.457		
900.0	899.5	898.5	898.5	1.9	1.9	171.57	-29.2	25.1	53.9	50.1	3.81	14.137		
1,000.0	998.7	997.7	997.7	2.2	2.1	173.10	-29.2	25.1	66.0	61.7	4.26	15.497		
1,100.0	1,097.5	1,096.5	1,096.5	2.5	2.4	174.39	-29.2	25.1	81.6	76.9	4.70	17.347		
1,166.3	1,162.7	1,161.7	1,161.7	2.7	2.5	175.10	-29.2	25.1	93.8	88.8	4.99	18.779		
1,200.0	1,195.7	1,194.7	1,194.7	2.8	2.6	175.42	-29.2	25.1	100.4	95.2	5.15	19.503		
1,300.0	1,293.7	1,292.7	1,292.7	3.2	2.8	176.17	-29.2	25.1	120.0	114.4	5.60	21.409		
1,400.0	1,391.8	1,390.8	1,390.8	3.5	3.0	176.71	-29.2	25.1	139.6	133.5	6.06	23.015		
1,500.0	1,489.8	1,488.8	1,488.8	3.9	3.2	177.11	-29.2	25.1	159.2	152.6	6.53	24.385		
1,600.0	1,587.9	1,586.9	1,586.9	4.3	3.5	177.43	-29.2	25.1	178.8	171.8	6.99	25.564		
1,700.0	1,685.9	1,684.9	1,684.9	4.7	3.7	177.69	-29.2	25.1	198.4	191.0	7.46	26.590		
1,800.0	1,784.0	1,783.0	1,783.0	5.1	3.9	177.89	-29.2	25.1	218.0	210.1	7.93	27.489		
1,900.0	1,882.0	1,881.0	1,881.0	5.5	4.1	178.07	-29.2	25.1	237.7	229.3	8.40	28.283		
2,000.0	1,980.1	1,979.1	1,979.1	6.0	4.3	178.22	-29.2	25.1	257.3	248.4	8.88	28.990		
2,100.0	2,078.1	2,077.1	2,077.1	6.4	4.6	178.34	-29.2	25.1	276.9	267.6	9.35	29.622		
2,200.0	2,176.2	2,175.2	2,175.2	6.8	4.8	178.45	-29.2	25.1	296.6	286.7	9.82	30.191		
2,300.0	2,274.2	2,273.2	2,273.2	7.2	5.0	178.55	-29.2	25.1	316.2	305.9	10.30	30.706		
2,400.0	2,372.3	2,371.3	2,371.3	7.6	5.2	178.63	-29.2	25.1	335.8	325.1	10.77	31.174		
2,500.0	2,470.3	2,469.3	2,469.3	8.1	5.4	178.71	-29.2	25.1	355.5	344.2	11.25	31.600		
2,600.0	2,568.4	2,567.4	2,567.4	8.5	5.7	178.78	-29.2	25.1	375.1	363.4	11.73	31.991		
2,700.0	2,666.4	2,665.4	2,665.4	8.9	5.9	178.84	-29.2	25.1	394.7	382.5	12.20	32.350		
2,800.0	2,764.5	2,763.5	2,763.5	9.3	6.1	178.89	-29.2	25.1	414.4	401.7	12.68	32.681		
2,900.0	2,862.6	2,861.6	2,861.6	9.8	6.3	178.94	-29.2	25.1	434.0	420.9	13.16	32.988		
3,000.0	2,960.6	2,959.6	2,959.6	10.2	6.5	178.99	-29.2	25.1	453.7	440.0	13.63	33.272		
3,100.0	3,058.7	3,057.7	3,057.7	10.6	6.8	179.03	-29.2	25.1	473.3	459.2	14.11	33.536		
3,200.0	3,156.7	3,155.7	3,155.7	11.0	7.0	179.07	-29.2	25.1	492.9	478.3	14.59	33.783		
3,300.0	3,254.8	3,253.8	3,253.8	11.5	7.2	179.10	-29.2	25.1	512.6	497.5	15.07	34.013		
3,400.0	3,352.8	3,351.8	3,351.8	11.9	7.4	179.14	-29.2	25.1	532.2	516.7	15.55	34.229		
3,500.0	3,450.9	3,449.9	3,449.9	12.3	7.6	179.17	-29.2	25.1	551.8	535.8	16.03	34.431		
3,600.0	3,548.9	3,547.9	3,547.9	12.7	7.9	179.20	-29.2	25.1	571.5	555.0	16.51	34.621		
3,700.0	3,647.0	3,646.0	3,646.0	13.2	8.1	179.22	-29.2	25.1	591.1	574.1	16.99	34.800		
3,800.0	3,745.0	3,744.0	3,744.0	13.6	8.3	179.25	-29.2	25.1	610.8	593.3	17.47	34.969		
3,900.0	3,843.1	3,842.1	3,842.1	14.0	8.5	179.27	-29.2	25.1	630.4	612.5	17.95	35.129		
4,000.0	3,941.1	3,940.1	3,940.1	14.5	8.7	179.29	-29.2	25.1	650.0	631.6	18.43	35.280		
4,100.0	4,039.2	4,038.2	4,038.2	14.9	9.0	179.31	-29.2	25.1	669.7	650.8	18.90	35.423		
4,200.0	4,137.2	4,136.2	4,136.2	15.3	9.2	179.33	-29.2	25.1	689.3	669.9	19.38	35.559		
4,300.0	4,235.3	4,234.3	4,234.3	15.7	9.4	179.35	-29.2	25.1	709.0	689.1	19.87	35.688		
4,400.0	4,333.3	4,332.3	4,332.3	16.2	9.6	179.37	-29.2	25.1	728.6	708.2	20.35	35.811		
4,506.1	4,437.3	4,436.3	4,436.3	16.6	9.9	179.39	-29.2	25.1	749.4	728.6	20.86	35.935		
4,600.0	4,529.7	4,528.7	4,528.7	17.0	10.1	179.40	-29.2	25.1	766.4	745.0	21.33	35.924		
4,700.0	4,628.6	4,627.6	4,627.6	17.2	10.3	179.42	-29.2	25.1	781.0	759.3	21.79	35.847		
4,800.0	4,728.0	4,727.0	4,727.0	17.5	10.5	179.43	-29.2	25.1	792.3	770.1	22.21	35.666		
4,900.0	4,827.7	4,826.7	4,826.7	17.7	10.7	179.44	-29.2	25.1	800.0	777.4	22.61	35.387		
5,000.0	4,927.6	4,926.6	4,926.6	17.8	11.0	179.44	-29.2	25.1	804.3	781.3	22.97	35.016		

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

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWDD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,072.4	5,000.0	4,999.0	4,999.0	17.9	11.1	150.52	-29.2	25.1	805.2	782.0	23.21	34.686		
5,100.0	5,027.6	5,026.6	5,026.6	18.0	11.2	150.52	-29.2	25.1	805.2	781.9	23.33	34.521		
5,200.0	5,127.6	5,126.6	5,126.6	18.1	11.4	150.52	-29.2	25.1	805.2	781.5	23.75	33.908		
5,300.0	5,227.6	5,226.6	5,226.6	18.2	11.6	150.52	-29.2	25.1	805.2	781.0	24.17	33.316		
5,400.0	5,327.6	5,326.6	5,326.6	18.4	11.9	150.52	-29.2	25.1	805.2	780.6	24.59	32.742		
5,500.0	5,427.6	5,426.6	5,426.6	18.5	12.1	150.52	-29.2	25.1	805.2	780.2	25.02	32.187		
5,600.0	5,527.6	5,526.6	5,526.6	18.7	12.3	150.52	-29.2	25.1	805.2	779.8	25.44	31.649		
5,700.0	5,627.6	5,626.6	5,626.6	18.8	12.5	150.52	-29.2	25.1	805.2	779.4	25.87	31.128		
5,800.0	5,727.6	5,726.6	5,726.6	18.9	12.8	150.52	-29.2	25.1	805.2	778.9	26.29	30.623		
5,852.5	5,780.1	5,779.1	5,779.1	19.0	12.9	150.52	-29.2	25.1	805.2	778.7	26.52	30.364		
5,900.0	5,827.5	5,826.5	5,826.5	19.1	13.0	-28.71	-29.2	25.1	803.3	776.8	26.50	30.318		
5,950.0	5,877.0	5,876.0	5,876.0	19.1	13.1	-29.28	-29.2	25.1	797.2	770.9	26.31	30.302		
6,000.0	5,925.6	5,924.6	5,924.6	19.0	13.2	-30.26	-29.2	25.1	787.1	761.1	25.98	30.293		
6,050.0	5,972.9	5,971.9	5,971.9	18.9	13.3	-31.70	-29.2	25.1	772.9	747.4	25.55	30.248		
6,100.0	6,018.4	6,017.4	6,017.4	18.8	13.4	-33.66	-29.2	25.1	755.0	730.0	25.08	30.104		
6,150.0	6,061.7	6,060.7	6,060.7	18.6	13.5	-36.20	-29.2	25.1	733.7	709.0	24.65	29.759		
6,200.0	6,102.4	6,101.4	6,101.4	18.4	13.6	-39.42	-29.2	25.1	709.1	684.8	24.38	29.091		
6,250.0	6,140.1	6,139.1	6,139.1	18.2	13.7	-43.39	-29.2	25.1	681.8	657.5	24.37	27.981		
6,300.0	6,174.5	6,173.5	6,173.5	18.0	13.8	-48.19	-29.2	25.1	652.2	627.5	24.72	26.383		
6,350.0	6,205.3	6,204.3	6,204.3	17.8	13.8	-53.80	-29.2	25.1	620.9	595.4	25.46	24.389		
6,400.0	6,232.2	6,231.2	6,231.2	17.5	13.9	-60.11	-29.2	25.1	588.4	561.9	26.48	22.219		
6,450.0	6,254.9	6,253.9	6,253.9	17.3	13.9	-66.81	-29.2	25.1	555.5	527.9	27.59	20.130		
6,500.0	6,273.3	6,272.3	6,272.3	17.1	14.0	-73.49	-29.2	25.1	522.9	494.3	28.57	18.303		
6,550.0	6,287.1	6,286.1	6,286.1	16.9	14.0	-79.64	-29.2	25.1	491.6	462.4	29.26	16.803		
6,600.0	6,296.2	6,295.2	6,295.2	16.7	14.0	-84.83	-29.2	25.1	462.6	433.0	29.64	15.607		
6,650.0	6,300.6	6,299.6	6,299.6	16.6	14.0	-88.77	-29.2	25.1	436.9	407.1	29.81	14.657		
6,670.7	6,301.0	6,300.0	6,300.0	16.5	14.0	-90.00	-29.2	25.1	427.5	397.7	29.84	14.324		
6,700.0	6,301.0	6,300.0	6,300.0	16.4	14.0	-90.00	-29.2	25.1	415.6	385.7	29.86	13.916		
6,800.0	6,301.0	6,300.0	6,300.0	16.3	14.0	-90.00	-29.2	25.1	388.9	358.8	30.07	12.931		
6,857.2	6,301.0	6,300.0	6,300.0	16.4	14.0	-90.00	-29.2	25.1	384.7	354.3	30.32	12.685		
6,900.0	6,301.0	6,300.0	6,300.0	16.5	14.0	-90.00	-29.2	25.1	387.0	356.5	30.51	12.685 SF		
7,000.0	6,301.0	6,300.0	6,300.0	17.1	14.0	-90.00	-29.2	25.1	410.3	379.1	31.15	13.170		
7,100.0	6,301.0	6,300.0	6,300.0	18.0	14.0	-90.00	-29.2	25.1	454.9	422.9	31.98	14.222		
7,200.0	6,301.0	6,300.0	6,300.0	19.0	14.0	-90.00	-29.2	25.1	515.2	482.2	32.97	15.626		
7,300.0	6,301.0	6,300.0	6,300.0	20.2	14.0	-90.00	-29.2	25.1	586.5	552.4	34.10	17.201		
7,400.0	6,301.0	6,300.0	6,300.0	21.5	14.0	-90.00	-29.2	25.1	665.2	629.9	35.34	18.824		
7,500.0	6,301.0	6,300.0	6,300.0	22.8	14.0	-90.00	-29.2	25.1	749.1	712.4	36.68	20.423		
7,600.0	6,301.0	6,300.0	6,300.0	24.3	14.0	-90.00	-29.2	25.1	836.4	798.4	38.10	21.957		
7,700.0	6,301.0	6,300.0	6,300.0	25.8	14.0	-90.00	-29.2	25.1	926.4	886.8	39.58	23.406		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Project:	SEC.1-T4N-R63W	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Reference Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham P-T-1HZ	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 (6-15-12)	Offset TVD Reference:	Offset Datum

Offset Design Latham 43-1 Pad Sec.1-T4N-R63W - Latham 33-1 - Wellbore #1 - Plan #1 (5-30-12)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,500.0	6,301.0	6,450.5	6,299.0	57.2	26.5	90.00	-2,761.4	-1,307.4	995.0	922.4	72.59	13.707	
9,567.2	6,301.0	6,450.5	6,299.0	58.4	26.5	90.00	-2,761.4	-1,307.4	992.8	918.9	73.84	13.445 CC	
9,600.0	6,301.0	6,450.5	6,299.0	59.0	26.5	90.00	-2,761.4	-1,307.4	993.3	918.9	74.45	13.342 ES, SF	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Project:	SEC.1-T4N-R63W	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Reference Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham P-T-1HZ	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 (6-15-12)	Offset TVD Reference:	Offset Datum

Offset Design												Latham 43-1 Pad Sec.1-T4N-R63W - Latham 42-1 - Wellbore #1 - Plan #1 (5-30-12)		Offset Site Error:		0.0 ft
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
7,400.0	6,301.0	6,466.3	6,300.0	21.5	27.7	-90.00	-1,479.1	-47.4	950.5	901.6	48.97	19.412				
7,500.0	6,301.0	6,466.3	6,300.0	22.8	27.7	-90.00	-1,479.1	-47.4	855.8	805.5	50.30	17.012				
7,600.0	6,301.0	6,466.3	6,300.0	24.3	27.7	-90.00	-1,479.1	-47.4	762.4	710.7	51.72	14.740				
7,700.0	6,301.0	6,466.3	6,300.0	25.8	27.7	-90.00	-1,479.1	-47.4	670.9	617.7	53.21	12.609				
7,800.0	6,301.0	6,466.3	6,300.0	27.3	27.7	-90.00	-1,479.1	-47.4	582.2	527.4	54.75	10.634				
7,900.0	6,301.0	6,466.3	6,300.0	28.9	27.7	-90.00	-1,479.1	-47.4	497.8	441.4	56.33	8.836				
8,000.0	6,301.0	6,466.3	6,300.0	30.5	27.7	-90.00	-1,479.1	-47.4	420.2	362.3	57.96	7.250				
8,100.0	6,301.0	6,466.3	6,300.0	32.2	27.7	-90.00	-1,479.1	-47.4	354.2	294.6	59.62	5.940				
8,200.0	6,301.0	6,466.3	6,300.0	33.9	27.7	-90.00	-1,479.1	-47.4	307.1	245.8	61.31	5.008				
8,300.0	6,301.0	6,466.3	6,300.0	35.6	27.7	-90.00	-1,479.1	-47.4	288.3	225.3	63.02	4.575				
8,305.8	6,301.0	6,466.3	6,300.0	35.7	27.7	-90.00	-1,479.1	-47.4	288.3	225.1	63.12	4.567 CC, ES, SF				
8,400.0	6,301.0	6,466.3	6,300.0	37.3	27.7	-90.00	-1,479.1	-47.4	303.3	238.5	64.76	4.683				
8,500.0	6,301.0	6,466.3	6,300.0	39.1	27.7	-90.00	-1,479.1	-47.4	347.6	281.1	66.51	5.226				
8,600.0	6,301.0	6,466.3	6,300.0	40.8	27.7	-90.00	-1,479.1	-47.4	411.9	343.6	68.28	6.033				
8,700.0	6,301.0	6,466.3	6,300.0	42.6	27.7	-90.00	-1,479.1	-47.4	488.4	418.3	70.06	6.971				
8,800.0	6,301.0	6,466.3	6,300.0	44.4	27.7	-90.00	-1,479.1	-47.4	572.1	500.3	71.86	7.962				
8,900.0	6,301.0	6,466.3	6,300.0	46.2	27.7	-90.00	-1,479.1	-47.4	660.4	586.8	73.66	8.966				
9,000.0	6,301.0	6,466.3	6,300.0	48.0	27.7	-90.00	-1,479.1	-47.4	751.7	676.2	75.48	9.959				
9,100.0	6,301.0	6,466.3	6,300.0	49.8	27.7	-90.00	-1,479.1	-47.4	844.9	767.6	77.30	10.931				
9,200.0	6,301.0	6,466.3	6,300.0	51.6	27.7	-90.00	-1,479.1	-47.4	939.5	860.4	79.13	11.873				

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Project:	SEC.1-T4N-R63W	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Reference Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham P-T-1HZ	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 (6-15-12)	Offset TVD Reference:	Offset Datum

Offset Design												Latham 43-1 Pad Sec.1-T4N-R63W - Latham 43-1 (Vert.) - Wellbore #1 - Plan #1 (5-30-12)		Offset Site Error:		0.0 ft	
Survey Program: 0-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
8,700.0	6,301.0	6,301.0	6,301.0	42.6	14.1	-90.00	-2,787.0	-100.4	937.3	880.9	56.44	16.608					
8,800.0	6,301.0	6,301.0	6,301.0	44.4	14.1	-90.00	-2,787.0	-100.4	840.2	782.0	58.23	14.430					
8,900.0	6,301.0	6,301.0	6,301.0	46.2	14.1	-90.00	-2,787.0	-100.4	744.0	683.9	60.04	12.392					
9,000.0	6,301.0	6,301.0	6,301.0	48.0	14.1	-90.00	-2,787.0	-100.4	648.8	587.0	61.85	10.490					
9,100.0	6,301.0	6,301.0	6,301.0	49.8	14.1	-90.00	-2,787.0	-100.4	555.4	491.7	63.67	8.722					
9,200.0	6,301.0	6,301.0	6,301.0	51.6	14.1	-90.00	-2,787.0	-100.4	464.7	399.2	65.50	7.094					
9,300.0	6,301.0	6,301.0	6,301.0	53.5	14.1	-90.00	-2,787.0	-100.4	378.7	311.3	67.34	5.623					
9,400.0	6,301.0	6,301.0	6,301.0	55.3	14.1	-90.00	-2,787.0	-100.4	301.5	232.3	69.19	4.357					
9,500.0	6,301.0	6,301.0	6,301.0	57.2	14.1	-90.00	-2,787.0	-100.4	241.6	170.5	71.03	3.401					
9,600.0	6,301.0	6,301.0	6,301.0	59.0	14.1	-90.00	-2,787.0	-100.4	214.1	141.2	72.89	2.937					
9,612.6	6,301.0	6,301.0	6,301.0	59.2	14.1	-90.00	-2,787.0	-100.4	213.7	140.6	73.12	2.923 CC, ES, SF					
9,700.0	6,301.0	6,301.0	6,301.0	60.9	14.1	-90.00	-2,787.0	-100.4	230.9	156.2	74.75	3.089					
9,800.0	6,301.0	6,301.0	6,301.0	62.7	14.1	-90.00	-2,787.0	-100.4	284.2	207.6	76.61	3.710					
9,900.0	6,301.0	6,301.0	6,301.0	64.6	14.1	-90.00	-2,787.0	-100.4	358.1	279.7	78.48	4.564					
10,000.0	6,301.0	6,301.0	6,301.0	66.5	14.1	-90.00	-2,787.0	-100.4	442.4	362.1	80.35	5.506					
10,100.0	6,301.0	6,301.0	6,301.0	68.3	14.1	-90.00	-2,787.0	-100.4	532.2	450.0	82.22	6.473					
10,200.0	6,301.0	6,301.0	6,301.0	70.2	14.1	-90.00	-2,787.0	-100.4	625.1	541.0	84.10	7.433					
10,300.0	6,301.0	6,301.0	6,301.0	72.1	14.1	-90.00	-2,787.0	-100.4	719.8	633.9	85.98	8.373					
10,400.0	6,301.0	6,301.0	6,301.0	74.0	14.1	-90.00	-2,787.0	-100.4	815.9	728.0	87.86	9.286					
10,500.0	6,301.0	6,301.0	6,301.0	75.8	14.1	-90.00	-2,787.0	-100.4	912.8	823.0	89.74	10.171					

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Project:	SEC.1-T4N-R63W	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Reference Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham P-T-1HZ	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 (6-15-12)	Offset TVD Reference:	Offset Datum

Offset Design												Latham 43-1 Pad Sec.1-T4N-R63W - Latham R-1 - Wellbore #1 - Plan #1 (5-30-12)		Offset Site Error:		0.0 ft	
Survey Program: 0-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor					
8,100.0	6,301.0	6,379.5	6,299.0	32.2	21.2	90.00	-2,171.3	-724.8	972.9	922.6	50.35	19.323					
8,200.0	6,301.0	6,379.5	6,299.0	33.9	21.2	90.00	-2,171.3	-724.8	882.8	830.7	52.04	16.963					
8,300.0	6,301.0	6,379.5	6,299.0	35.6	21.2	90.00	-2,171.3	-724.8	794.9	741.2	53.75	14.789					
8,400.0	6,301.0	6,379.5	6,299.0	37.3	21.2	90.00	-2,171.3	-724.8	710.3	654.8	55.49	12.802					
8,500.0	6,301.0	6,379.5	6,299.0	39.1	21.2	90.00	-2,171.3	-724.8	630.3	573.0	57.24	11.011					
8,600.0	6,301.0	6,379.5	6,299.0	40.8	21.2	90.00	-2,171.3	-724.8	556.7	497.7	59.01	9.434					
8,700.0	6,301.0	6,379.5	6,299.0	42.6	21.2	90.00	-2,171.3	-724.8	492.5	431.7	60.79	8.102					
8,800.0	6,301.0	6,379.5	6,299.0	44.4	21.2	90.00	-2,171.3	-724.8	441.8	379.3	62.58	7.060					
8,900.0	6,301.0	6,379.5	6,299.0	46.2	21.2	90.00	-2,171.3	-724.8	409.7	345.3	64.39	6.363					
8,986.7	6,301.0	6,379.5	6,299.0	47.8	21.2	90.00	-2,171.3	-724.8	400.5	334.5	65.96	6.071 CC					
9,000.0	6,301.0	6,379.5	6,299.0	48.0	21.2	90.00	-2,171.3	-724.8	400.7	334.5	66.20	6.052 ES, SF					
9,100.0	6,301.0	6,379.5	6,299.0	49.8	21.2	90.00	-2,171.3	-724.8	416.2	348.2	68.03	6.118					
9,200.0	6,301.0	6,379.5	6,299.0	51.6	21.2	90.00	-2,171.3	-724.8	453.7	383.9	69.86	6.495					
9,300.0	6,301.0	6,379.5	6,299.0	53.5	21.2	90.00	-2,171.3	-724.8	508.5	436.8	71.70	7.092					
9,400.0	6,301.0	6,379.5	6,299.0	55.3	21.2	90.00	-2,171.3	-724.8	575.5	502.0	73.54	7.826					
9,500.0	6,301.0	6,379.5	6,299.0	57.2	21.2	90.00	-2,171.3	-724.8	651.0	575.7	75.39	8.636					
9,600.0	6,301.0	6,379.5	6,299.0	59.0	21.2	90.00	-2,171.3	-724.8	732.5	655.2	77.24	9.483					
9,700.0	6,301.0	6,379.5	6,299.0	60.9	21.2	90.00	-2,171.3	-724.8	818.0	738.9	79.10	10.342					
9,800.0	6,301.0	6,379.5	6,299.0	62.7	21.2	90.00	-2,171.3	-724.8	906.6	825.6	80.96	11.197					
9,900.0	6,301.0	6,379.5	6,299.0	64.6	21.2	90.00	-2,171.3	-724.8	997.2	914.4	82.83	12.040					

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Project:	SEC.1-T4N-R63W	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Reference Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham P-T-1HZ	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 (6-15-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4561.0ft (Original Well Elev) Coordinates are relative to: Latham P-T-1HZ
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.72°



Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Latham P-T-1HZ
Project:	SEC.1-T4N-R63W	TVD Reference:	WELL @ 4561.0ft (Original Well Elev)
Reference Site:	Latham P-T-1HZ Pad Sec.1-T4N-R63W	MD Reference:	WELL @ 4561.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham P-T-1HZ	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 (6-15-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4561.0ft (Original Well Elev) Coordinates are relative to: Latham P-T-1HZ
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: 0.72°

