

ConocoPhillips RBU

Niobrara (Arapahoe)

B&D Land pad

B&D Land 4-64 3-1H

Wellbore #1

Plan: B&D Land 4-64 3-1H Rev A

Standard Planning Report

30 August, 2016

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well B&D Land 4-64 3-1H
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 5641.2usft (Original Well Elev)
Project:	Niobrara (Arapahoe) - GH	MD Reference:	RKB @ 5641.2usft (Original Well Elev)
Site:	B&D Land pad	North Reference:	True
Well:	B&D Land 4-64 3-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	B&D Land 4-64 3-1H Rev A		

Project	Niobrara (Arapahoe) - GH, Arapahoe County Colorado, Exploration Niobrara Wells		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	B&D Land pad, T4S - R64W, Sec 4		
Site Position:		Northing:	1,690,983.54 usft
From:	Lat/Long	Easting:	3,268,027.85 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39° 43' 36.098 N
		Longitude:	104° 32' 49.492 W
		Grid Convergence:	0.60 °

Well	B&D Land 4-64 3-1H					
Well Position	+N/-S	39.9 usft	Northing:	1,691,023.44 usft	Latitude:	39° 43' 36.493 N
	+E/-W	0.6 usft	Easting:	3,268,028.04 usft	Longitude:	104° 32' 49.484 W
Position Uncertainty		2.0 usft	Wellhead Elevation:		Ground Level:	5,617.2 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	8/7/2014	8.36	66.43	52,354

Design	B&D Land 4-64 3-1H Rev A			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	273.19

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,605.0	6.07	39.74	2,604.2	16.5	13.7	1.50	1.50	0.00	39.74	
6,641.3	6.07	39.74	6,617.8	344.9	286.8	0.00	0.00	0.00	0.00	
7,046.2	0.00	0.00	7,022.0	361.4	300.5	1.50	-1.50	0.00	180.00	
7,946.2	90.00	271.07	7,595.0	372.1	-272.4	10.00	10.00	0.00	0.00	B&D Land 4-64 3-1H
17,561.9	90.00	271.07	7,595.0	551.1	-9,886.4	0.00	0.00	0.00	0.00	B&D Land 4-64 3-1H

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Well:	B&D Land 4-64 3-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	B&D Land 4-64 3-1H Rev A		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,938.0	0.00	0.00	1,938.0	0.0	0.0	0.0	0.00	0.00	0.00
Surface									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	1.50	39.74	2,300.0	1.0	0.8	-0.8	1.50	1.50	0.00
2,400.0	3.00	39.74	2,399.9	4.0	3.3	-3.1	1.50	1.50	0.00
2,500.0	4.50	39.74	2,499.7	9.1	7.5	-7.0	1.50	1.50	0.00
2,600.0	6.00	39.74	2,599.3	16.1	13.4	-12.5	1.50	1.50	0.00
2,605.0	6.07	39.74	2,604.2	16.5	13.7	-12.8	1.50	1.50	0.00
2,700.0	6.07	39.74	2,698.7	24.2	20.1	-18.8	0.00	0.00	0.00
2,800.0	6.07	39.74	2,798.1	32.4	26.9	-25.1	0.00	0.00	0.00
2,900.0	6.07	39.74	2,897.6	40.5	33.7	-31.4	0.00	0.00	0.00
3,000.0	6.07	39.74	2,997.0	48.6	40.4	-37.7	0.00	0.00	0.00
3,100.0	6.07	39.74	3,096.5	56.8	47.2	-44.0	0.00	0.00	0.00
3,200.0	6.07	39.74	3,195.9	64.9	54.0	-50.3	0.00	0.00	0.00
3,300.0	6.07	39.74	3,295.3	73.0	60.7	-56.6	0.00	0.00	0.00
3,400.0	6.07	39.74	3,394.8	81.2	67.5	-62.9	0.00	0.00	0.00
3,500.0	6.07	39.74	3,494.2	89.3	74.3	-69.2	0.00	0.00	0.00
3,600.0	6.07	39.74	3,593.6	97.5	81.0	-75.5	0.00	0.00	0.00
3,700.0	6.07	39.74	3,693.1	105.6	87.8	-81.8	0.00	0.00	0.00
3,800.0	6.07	39.74	3,792.5	113.7	94.6	-88.1	0.00	0.00	0.00
3,900.0	6.07	39.74	3,892.0	121.9	101.3	-94.4	0.00	0.00	0.00
4,000.0	6.07	39.74	3,991.4	130.0	108.1	-100.7	0.00	0.00	0.00
4,100.0	6.07	39.74	4,090.8	138.1	114.8	-107.0	0.00	0.00	0.00
4,200.0	6.07	39.74	4,190.3	146.3	121.6	-113.3	0.00	0.00	0.00
4,300.0	6.07	39.74	4,289.7	154.4	128.4	-119.6	0.00	0.00	0.00
4,400.0	6.07	39.74	4,389.2	162.6	135.1	-125.9	0.00	0.00	0.00
4,500.0	6.07	39.74	4,488.6	170.7	141.9	-132.2	0.00	0.00	0.00
4,600.0	6.07	39.74	4,588.0	178.8	148.7	-138.5	0.00	0.00	0.00
4,700.0	6.07	39.74	4,687.5	187.0	155.4	-144.8	0.00	0.00	0.00
4,800.0	6.07	39.74	4,786.9	195.1	162.2	-151.1	0.00	0.00	0.00
4,900.0	6.07	39.74	4,886.3	203.2	169.0	-157.4	0.00	0.00	0.00
5,000.0	6.07	39.74	4,985.8	211.4	175.7	-163.7	0.00	0.00	0.00

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Well:	B&D Land 4-64 3-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	B&D Land 4-64 3-1H Rev A		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.0	6.07	39.74	5,085.2	219.5	182.5	-170.0	0.00	0.00	0.00
5,200.0	6.07	39.74	5,184.7	227.7	189.3	-176.3	0.00	0.00	0.00
5,300.0	6.07	39.74	5,284.1	235.8	196.0	-182.6	0.00	0.00	0.00
5,400.0	6.07	39.74	5,383.5	243.9	202.8	-188.9	0.00	0.00	0.00
5,500.0	6.07	39.74	5,483.0	252.1	209.6	-195.2	0.00	0.00	0.00
5,600.0	6.07	39.74	5,582.4	260.2	216.3	-201.5	0.00	0.00	0.00
5,700.0	6.07	39.74	5,681.9	268.3	223.1	-207.8	0.00	0.00	0.00
5,800.0	6.07	39.74	5,781.3	276.5	229.9	-214.1	0.00	0.00	0.00
5,900.0	6.07	39.74	5,880.7	284.6	236.6	-220.4	0.00	0.00	0.00
6,000.0	6.07	39.74	5,980.2	292.8	243.4	-226.7	0.00	0.00	0.00
6,100.0	6.07	39.74	6,079.6	300.9	250.1	-233.0	0.00	0.00	0.00
6,200.0	6.07	39.74	6,179.0	309.0	256.9	-239.3	0.00	0.00	0.00
6,300.0	6.07	39.74	6,278.5	317.2	263.7	-245.6	0.00	0.00	0.00
6,400.0	6.07	39.74	6,377.9	325.3	270.4	-251.9	0.00	0.00	0.00
6,500.0	6.07	39.74	6,477.4	333.4	277.2	-258.2	0.00	0.00	0.00
6,600.0	6.07	39.74	6,576.8	341.6	284.0	-264.5	0.00	0.00	0.00
6,641.3	6.07	39.74	6,617.8	344.9	286.8	-267.1	0.00	0.00	0.00
6,700.0	5.19	39.74	6,676.3	349.4	290.5	-270.6	1.50	-1.50	0.00
6,800.0	3.69	39.74	6,776.0	355.3	295.4	-275.2	1.50	-1.50	0.00
6,900.0	2.19	39.74	6,875.8	359.3	298.7	-278.2	1.50	-1.50	0.00
7,000.0	0.69	39.74	6,975.8	361.2	300.3	-279.7	1.50	-1.50	0.00
7,046.2	0.00	0.00	7,022.0	361.4	300.5	-279.9	1.50	-1.50	0.00
7,100.0	5.38	271.07	7,075.7	361.5	298.0	-277.4	10.00	10.00	0.00
7,200.0	15.38	271.07	7,174.0	361.8	280.0	-259.4	10.00	10.00	0.00
7,300.0	25.38	271.07	7,267.6	362.5	245.2	-224.6	10.00	10.00	0.00
7,400.0	35.38	271.07	7,353.8	363.4	194.7	-174.2	10.00	10.00	0.00
7,500.0	45.38	271.07	7,429.8	364.6	130.0	-109.5	10.00	10.00	0.00
7,600.0	55.38	271.07	7,493.5	366.0	53.1	-32.7	10.00	10.00	0.00
7,700.0	65.38	271.07	7,542.9	367.7	-33.7	54.1	10.00	10.00	0.00
7,800.0	75.38	271.07	7,576.4	369.4	-127.8	148.1	10.00	10.00	0.00
7,900.0	85.38	271.07	7,593.1	371.2	-226.2	246.5	10.00	10.00	0.00
7,946.2	90.00	271.07	7,595.0	372.1	-272.4	292.7	10.00	10.00	0.00
B&D Land 4-64 3-1H - BPI									
8,000.0	90.00	271.07	7,595.0	373.1	-326.1	346.4	0.00	0.00	0.00
8,100.0	90.00	271.07	7,595.0	375.0	-426.1	446.3	0.00	0.00	0.00
8,200.0	90.00	271.07	7,595.0	376.8	-526.1	546.3	0.00	0.00	0.00
8,300.0	90.00	271.07	7,595.0	378.7	-626.1	646.2	0.00	0.00	0.00
8,400.0	90.00	271.07	7,595.0	380.5	-726.1	746.1	0.00	0.00	0.00
8,500.0	90.00	271.07	7,595.0	382.4	-826.0	846.1	0.00	0.00	0.00
8,600.0	90.00	271.07	7,595.0	384.3	-926.0	946.0	0.00	0.00	0.00
8,700.0	90.00	271.07	7,595.0	386.1	-1,026.0	1,045.9	0.00	0.00	0.00
8,800.0	90.00	271.07	7,595.0	388.0	-1,126.0	1,145.8	0.00	0.00	0.00
8,900.0	90.00	271.07	7,595.0	389.8	-1,226.0	1,245.8	0.00	0.00	0.00
9,000.0	90.00	271.07	7,595.0	391.7	-1,326.0	1,345.7	0.00	0.00	0.00
9,100.0	90.00	271.07	7,595.0	393.6	-1,425.9	1,445.6	0.00	0.00	0.00
9,200.0	90.00	271.07	7,595.0	395.4	-1,525.9	1,545.6	0.00	0.00	0.00
9,300.0	90.00	271.07	7,595.0	397.3	-1,625.9	1,645.5	0.00	0.00	0.00
9,400.0	90.00	271.07	7,595.0	399.2	-1,725.9	1,745.4	0.00	0.00	0.00
9,500.0	90.00	271.07	7,595.0	401.0	-1,825.9	1,845.4	0.00	0.00	0.00
9,600.0	90.00	271.07	7,595.0	402.9	-1,925.9	1,945.3	0.00	0.00	0.00
9,700.0	90.00	271.07	7,595.0	404.7	-2,025.8	2,045.2	0.00	0.00	0.00
9,800.0	90.00	271.07	7,595.0	406.6	-2,125.8	2,145.2	0.00	0.00	0.00
9,900.0	90.00	271.07	7,595.0	408.5	-2,225.8	2,245.1	0.00	0.00	0.00

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,000.0	90.00	271.07	7,595.0	410.3	-2,325.8	2,345.0	0.00	0.00	0.00	
10,100.0	90.00	271.07	7,595.0	412.2	-2,425.8	2,444.9	0.00	0.00	0.00	
10,200.0	90.00	271.07	7,595.0	414.0	-2,525.8	2,544.9	0.00	0.00	0.00	
10,300.0	90.00	271.07	7,595.0	415.9	-2,625.7	2,644.8	0.00	0.00	0.00	
10,400.0	90.00	271.07	7,595.0	417.8	-2,725.7	2,744.7	0.00	0.00	0.00	
10,500.0	90.00	271.07	7,595.0	419.6	-2,825.7	2,844.7	0.00	0.00	0.00	
10,600.0	90.00	271.07	7,595.0	421.5	-2,925.7	2,944.6	0.00	0.00	0.00	
10,700.0	90.00	271.07	7,595.0	423.4	-3,025.7	3,044.5	0.00	0.00	0.00	
10,800.0	90.00	271.07	7,595.0	425.2	-3,125.6	3,144.5	0.00	0.00	0.00	
10,900.0	90.00	271.07	7,595.0	427.1	-3,225.6	3,244.4	0.00	0.00	0.00	
11,000.0	90.00	271.07	7,595.0	428.9	-3,325.6	3,344.3	0.00	0.00	0.00	
11,100.0	90.00	271.07	7,595.0	430.8	-3,425.6	3,444.3	0.00	0.00	0.00	
11,200.0	90.00	271.07	7,595.0	432.7	-3,525.6	3,544.2	0.00	0.00	0.00	
11,300.0	90.00	271.07	7,595.0	434.5	-3,625.6	3,644.1	0.00	0.00	0.00	
11,400.0	90.00	271.07	7,595.0	436.4	-3,725.5	3,744.1	0.00	0.00	0.00	
11,500.0	90.00	271.07	7,595.0	438.2	-3,825.5	3,844.0	0.00	0.00	0.00	
11,600.0	90.00	271.07	7,595.0	440.1	-3,925.5	3,943.9	0.00	0.00	0.00	
11,700.0	90.00	271.07	7,595.0	442.0	-4,025.5	4,043.8	0.00	0.00	0.00	
11,800.0	90.00	271.07	7,595.0	443.8	-4,125.5	4,143.8	0.00	0.00	0.00	
11,900.0	90.00	271.07	7,595.0	445.7	-4,225.5	4,243.7	0.00	0.00	0.00	
12,000.0	90.00	271.07	7,595.0	447.6	-4,325.4	4,343.6	0.00	0.00	0.00	
12,100.0	90.00	271.07	7,595.0	449.4	-4,425.4	4,443.6	0.00	0.00	0.00	
12,200.0	90.00	271.07	7,595.0	451.3	-4,525.4	4,543.5	0.00	0.00	0.00	
12,300.0	90.00	271.07	7,595.0	453.1	-4,625.4	4,643.4	0.00	0.00	0.00	
12,400.0	90.00	271.07	7,595.0	455.0	-4,725.4	4,743.4	0.00	0.00	0.00	
12,500.0	90.00	271.07	7,595.0	456.9	-4,825.3	4,843.3	0.00	0.00	0.00	
12,600.0	90.00	271.07	7,595.0	458.7	-4,925.3	4,943.2	0.00	0.00	0.00	
12,700.0	90.00	271.07	7,595.0	460.6	-5,025.3	5,043.2	0.00	0.00	0.00	
12,800.0	90.00	271.07	7,595.0	462.4	-5,125.3	5,143.1	0.00	0.00	0.00	
12,900.0	90.00	271.07	7,595.0	464.3	-5,225.3	5,243.0	0.00	0.00	0.00	
13,000.0	90.00	271.07	7,595.0	466.2	-5,325.3	5,343.0	0.00	0.00	0.00	
13,100.0	90.00	271.07	7,595.0	468.0	-5,425.2	5,442.9	0.00	0.00	0.00	
13,200.0	90.00	271.07	7,595.0	469.9	-5,525.2	5,542.8	0.00	0.00	0.00	
13,300.0	90.00	271.07	7,595.0	471.7	-5,625.2	5,642.7	0.00	0.00	0.00	
13,400.0	90.00	271.07	7,595.0	473.6	-5,725.2	5,742.7	0.00	0.00	0.00	
13,500.0	90.00	271.07	7,595.0	475.5	-5,825.2	5,842.6	0.00	0.00	0.00	
13,600.0	90.00	271.07	7,595.0	477.3	-5,925.2	5,942.5	0.00	0.00	0.00	
13,700.0	90.00	271.07	7,595.0	479.2	-6,025.1	6,042.5	0.00	0.00	0.00	
13,800.0	90.00	271.07	7,595.0	481.1	-6,125.1	6,142.4	0.00	0.00	0.00	
13,900.0	90.00	271.07	7,595.0	482.9	-6,225.1	6,242.3	0.00	0.00	0.00	
14,000.0	90.00	271.07	7,595.0	484.8	-6,325.1	6,342.3	0.00	0.00	0.00	
14,100.0	90.00	271.07	7,595.0	486.6	-6,425.1	6,442.2	0.00	0.00	0.00	
14,200.0	90.00	271.07	7,595.0	488.5	-6,525.0	6,542.1	0.00	0.00	0.00	
14,300.0	90.00	271.07	7,595.0	490.4	-6,625.0	6,642.1	0.00	0.00	0.00	
14,400.0	90.00	271.07	7,595.0	492.2	-6,725.0	6,742.0	0.00	0.00	0.00	
14,500.0	90.00	271.07	7,595.0	494.1	-6,825.0	6,841.9	0.00	0.00	0.00	
14,600.0	90.00	271.07	7,595.0	495.9	-6,925.0	6,941.8	0.00	0.00	0.00	
14,700.0	90.00	271.07	7,595.0	497.8	-7,025.0	7,041.8	0.00	0.00	0.00	
14,800.0	90.00	271.07	7,595.0	499.7	-7,124.9	7,141.7	0.00	0.00	0.00	
14,900.0	90.00	271.07	7,595.0	501.5	-7,224.9	7,241.6	0.00	0.00	0.00	
15,000.0	90.00	271.07	7,595.0	503.4	-7,324.9	7,341.6	0.00	0.00	0.00	
15,100.0	90.00	271.07	7,595.0	505.3	-7,424.9	7,441.5	0.00	0.00	0.00	
15,200.0	90.00	271.07	7,595.0	507.1	-7,524.9	7,541.4	0.00	0.00	0.00	
15,300.0	90.00	271.07	7,595.0	509.0	-7,624.9	7,641.4	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well B&D Land 4-64 3-1H
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 5641.2usft (Original Well Elev)
Project:	Niobrara (Arapahoe) - GH	MD Reference:	RKB @ 5641.2usft (Original Well Elev)
Site:	B&D Land pad	North Reference:	True
Well:	B&D Land 4-64 3-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	B&D Land 4-64 3-1H Rev A		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,400.0	90.00	271.07	7,595.0	510.8	-7,724.8	7,741.3	0.00	0.00	0.00	
15,500.0	90.00	271.07	7,595.0	512.7	-7,824.8	7,841.2	0.00	0.00	0.00	
15,600.0	90.00	271.07	7,595.0	514.6	-7,924.8	7,941.2	0.00	0.00	0.00	
15,700.0	90.00	271.07	7,595.0	516.4	-8,024.8	8,041.1	0.00	0.00	0.00	
15,800.0	90.00	271.07	7,595.0	518.3	-8,124.8	8,141.0	0.00	0.00	0.00	
15,900.0	90.00	271.07	7,595.0	520.1	-8,224.8	8,241.0	0.00	0.00	0.00	
16,000.0	90.00	271.07	7,595.0	522.0	-8,324.7	8,340.9	0.00	0.00	0.00	
16,100.0	90.00	271.07	7,595.0	523.9	-8,424.7	8,440.8	0.00	0.00	0.00	
16,200.0	90.00	271.07	7,595.0	525.7	-8,524.7	8,540.7	0.00	0.00	0.00	
16,300.0	90.00	271.07	7,595.0	527.6	-8,624.7	8,640.7	0.00	0.00	0.00	
16,400.0	90.00	271.07	7,595.0	529.5	-8,724.7	8,740.6	0.00	0.00	0.00	
16,500.0	90.00	271.07	7,595.0	531.3	-8,824.6	8,840.5	0.00	0.00	0.00	
16,600.0	90.00	271.07	7,595.0	533.2	-8,924.6	8,940.5	0.00	0.00	0.00	
16,700.0	90.00	271.07	7,595.0	535.0	-9,024.6	9,040.4	0.00	0.00	0.00	
16,800.0	90.00	271.07	7,595.0	536.9	-9,124.6	9,140.3	0.00	0.00	0.00	
16,900.0	90.00	271.07	7,595.0	538.8	-9,224.6	9,240.3	0.00	0.00	0.00	
17,000.0	90.00	271.07	7,595.0	540.6	-9,324.6	9,340.2	0.00	0.00	0.00	
17,100.0	90.00	271.07	7,595.0	542.5	-9,424.5	9,440.1	0.00	0.00	0.00	
17,200.0	90.00	271.07	7,595.0	544.3	-9,524.5	9,540.1	0.00	0.00	0.00	
17,300.0	90.00	271.07	7,595.0	546.2	-9,624.5	9,640.0	0.00	0.00	0.00	
17,400.0	90.00	271.07	7,595.0	548.1	-9,724.5	9,739.9	0.00	0.00	0.00	
17,500.0	90.00	271.07	7,595.0	549.9	-9,824.5	9,839.9	0.00	0.00	0.00	
17,561.9	90.00	271.07	7,595.0	551.1	-9,886.4	9,901.7	0.00	0.00	0.00	
B&D Land 4-64 3-1H -TBH										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		Longitude
B&D Land 4-64 3-1H -Tf	0.00	0.00	7,595.0	551.1	-9,886.4	1,691,470.79	3,258,136.50	39° 43' 41.920 N		104° 34' 56.020 W
- plan hits target center										
- Point										
B&D Land 4-64 3-1H - B	0.00	0.00	7,595.0	372.1	-272.4	1,691,392.66	3,267,751.77	39° 43' 40.170 N		104° 32' 52.970 W
- plan hits target center										
- Point										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,938.0	1,938.0	Surface	9-5/8	13-1/2	
17,561.9	7,595.0	Production	5-1/2	8-3/4	

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well B&D Land 4-64 3-1H
Company:	ConocoPhillips MCBU	TVD Reference:	RKB @ 5641.2usft (Original Well Elev)
Project:	Niobrara (Arapahoe) - GH	MD Reference:	RKB @ 5641.2usft (Original Well Elev)
Site:	B&D Land pad	North Reference:	True
Well:	B&D Land 4-64 3-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	B&D Land 4-64 3-1H Rev A		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,000.0	2,000.0	0.0	0.0	SHL: 850' FSL & 350' FEL
7,046.2	7,022.0	361.4	300.5	KOP: 1217' FSL & 50' FEL
7,946.2	7,595.0	372.1	-272.4	BPI: 1217' FSL & 623' FEL
17,426.9	7,595.0	548.6	-9,751.4	EPI: 1217' FSL & 460' FWL
17,561.0	7,595.0	551.1	-9,885.5	TBH: 1217' FSL & 325' FWL



B&D Land 4-64 3-1H
B&D Land 4-64 3-1H Rev A
Arapahoe County, CO
T4S - R64W, Sec 4

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	2200.0	0.00	0.00	2200.0	0.0	0.0	0.00	0.00	0.0
3	2605.0	6.07	39.74	2604.2	16.5	13.7	1.50	39.74	-12.8
4	6641.3	6.07	39.74	6617.8	344.9	286.8	0.00	0.00	-267.1
5	7046.2	0.00	0.00	7022.0	361.4	300.5	1.50	180.00	-279.9
6	7946.2	90.00	271.07	7595.0	372.1	-272.4	10.00	0.00	292.7
7	17561.9	90.00	271.07	7595.0	551.1	-9886.4	0.00	0.00	9901.7

