

ConocoPhillips RBU Gold Data

Niobrara Central Zone

Bear

Bear 3-65 22-23 3DH

Wellbore #1

Plan: Bear 3-65 22-23 3DH Rev.A

Standard Planning Report

16 October, 2017

ConocoPhillips

Planning Report

Database:	EDT 14 Central Planning	Local Co-ordinate Reference:	Well Bear 3-65 22-23 3DH
Company:	ConocoPhillips RBU Gold Data	TVD Reference:	WELL @ 5596.90ft (Original Well Elev)
Project:	Niobrara Central Zone	MD Reference:	WELL @ 5596.90ft (Original Well Elev)
Site:	Bear	North Reference:	True
Well:	Bear 3-65 22-23 3DH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Bear 3-65 22-23 3DH Rev.A		

Project	Niobrara Central Zone, Colorado Central Zone, FIPS Zone: 0502		
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		Bear			
Site Position:		Northing:	1,707,569.460 usft	Latitude:	39° 46' 23.050 N
From:	Lat/Long	Easting:	3,236,851.239 usft	Longitude:	104° 39' 26.530 W
Position Uncertainty:	2.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.53 °

Well	Bear 3-65 22-23 3DH					
Well Position	+N/-S	-97.15 ft	Northing:	1,707,472.308 usft	Latitude:	39° 46' 22.090 N
	+E/-W	-0.78 ft	Easting:	3,236,851.360 usft	Longitude:	104° 39' 26.540 W
Position Uncertainty		2.00 ft	Wellhead Elevation:		Ground Level:	5,569.90 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2017	10/16/2017	8.26	66.39	52,018.39526307

Design	Bear 3-65 22-23 3DH Rev.A			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	89.62

Plan Survey Tool Program	Date	10/16/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	2,172.00	Bear 3-65 22-23 3DH Rev.A (We	SDI ADK 105 AdK w/ Gyrocompass HS refer
2	2,172.00	18,217.40	Bear 3-65 22-23 3DH Rev.A (We	MWD+IFR_No SAG MWD + IFR (No SAG) correctic

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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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,172.00	0.00	0.00	2,172.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,350.36	23.26	279.38	6,308.14	50.59	-306.18	1.50	1.50	0.00	279.38	
7,251.80	23.26	279.38	7,136.34	108.61	-657.34	0.00	0.00	0.00	0.00	
8,388.93	90.75	90.54	7,931.00	156.85	-121.80	10.00	5.94	15.05	170.33	Bear 3DH BPI
18,217.40	90.75	90.54	7,802.00	64.59	9,705.38	0.00	0.00	0.00	0.00	Bear 3DH BHL

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Wellbore:	Wellbore #1		
Design:	Bear 3-65 22-23 3DH Rev.A		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,172.00	0.00	0.00	2,172.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	1.50	279.38	4,899.99	0.21	-1.29	-1.29	1.50	1.50	0.00
5,000.00	3.00	279.38	4,999.91	0.85	-5.16	-5.16	1.50	1.50	0.00
5,100.00	4.50	279.38	5,099.69	1.92	-11.62	-11.60	1.50	1.50	0.00

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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)
5,200.00	6.00	279.38	5,199.27	3.41	-20.64	-20.62	1.50	1.50	0.00
5,300.00	7.50	279.38	5,298.57	5.33	-32.24	-32.20	1.50	1.50	0.00
5,400.00	9.00	279.38	5,397.54	7.67	-46.40	-46.35	1.50	1.50	0.00
5,500.00	10.50	279.38	5,496.09	10.43	-63.11	-63.04	1.50	1.50	0.00
5,600.00	12.00	279.38	5,594.16	13.61	-82.35	-82.26	1.50	1.50	0.00
5,700.00	13.50	279.38	5,691.70	17.20	-104.13	-104.01	1.50	1.50	0.00
5,800.00	15.00	279.38	5,788.62	21.22	-128.41	-128.27	1.50	1.50	0.00
5,900.00	16.50	279.38	5,884.86	25.64	-155.19	-155.02	1.50	1.50	0.00
6,000.00	18.00	279.38	5,980.36	30.48	-184.45	-184.24	1.50	1.50	0.00
6,100.00	19.50	279.38	6,075.05	35.72	-216.16	-215.92	1.50	1.50	0.00
6,200.00	21.00	279.38	6,168.86	41.36	-250.31	-250.03	1.50	1.50	0.00
6,300.00	22.50	279.38	6,261.74	47.40	-286.87	-286.55	1.50	1.50	0.00
6,350.36	23.26	279.38	6,308.14	50.59	-306.18	-305.84	1.50	1.50	0.00
6,400.00	23.26	279.38	6,353.75	53.78	-325.52	-325.16	0.00	0.00	0.00
6,500.00	23.26	279.38	6,445.62	60.22	-364.48	-364.07	0.00	0.00	0.00
6,600.00	23.26	279.38	6,537.50	66.66	-403.43	-402.98	0.00	0.00	0.00
6,700.00	23.26	279.38	6,629.37	73.09	-442.39	-441.89	0.00	0.00	0.00
6,800.00	23.26	279.38	6,721.25	79.53	-481.34	-480.80	0.00	0.00	0.00
6,900.00	23.26	279.38	6,813.13	85.97	-520.30	-519.71	0.00	0.00	0.00
7,000.00	23.26	279.38	6,905.00	92.40	-559.25	-558.62	0.00	0.00	0.00
7,100.00	23.26	279.38	6,996.88	98.84	-598.21	-597.54	0.00	0.00	0.00
7,200.00	23.26	279.38	7,088.75	105.27	-637.16	-636.45	0.00	0.00	0.00
7,251.80	23.26	279.38	7,136.34	108.61	-657.34	-656.60	0.00	0.00	0.00
7,300.00	18.52	281.93	7,181.36	111.74	-674.23	-673.47	10.00	-9.82	5.28
7,400.00	8.98	295.36	7,278.41	118.38	-696.88	-696.07	10.00	-9.54	13.43
7,500.00	4.23	26.59	7,377.91	125.04	-702.29	-701.44	10.00	-4.75	91.23
7,600.00	12.45	72.97	7,476.85	131.51	-690.30	-689.41	10.00	8.21	46.38
7,700.00	22.17	81.10	7,572.22	137.60	-661.28	-660.35	10.00	9.73	8.14
7,800.00	32.06	84.40	7,661.12	143.13	-616.11	-615.14	10.00	9.89	3.29
7,900.00	42.00	86.26	7,740.86	147.91	-556.16	-555.16	10.00	9.94	1.86
8,000.00	51.96	87.51	7,809.00	151.82	-483.24	-482.22	10.00	9.96	1.25
8,100.00	61.93	88.46	7,863.48	154.73	-399.59	-398.55	10.00	9.97	0.95
8,200.00	71.90	89.24	7,902.64	156.55	-307.73	-306.68	10.00	9.97	0.79
8,300.00	81.88	89.94	7,925.29	157.22	-210.46	-209.41	10.00	9.98	0.70
8,388.93	90.75	90.54	7,931.00	156.85	-121.80	-120.76	10.00	9.98	0.67
8,400.00	90.75	90.54	7,930.85	156.74	-110.74	-109.69	0.00	0.00	0.00
8,500.00	90.75	90.54	7,929.54	155.81	-10.75	-9.72	0.00	0.00	0.00
8,600.00	90.75	90.54	7,928.23	154.87	89.23	90.26	0.00	0.00	0.00
8,700.00	90.75	90.54	7,926.92	153.93	189.22	190.24	0.00	0.00	0.00
8,800.00	90.75	90.54	7,925.60	152.99	289.21	290.22	0.00	0.00	0.00
8,900.00	90.75	90.54	7,924.29	152.05	389.20	390.20	0.00	0.00	0.00
9,000.00	90.75	90.54	7,922.98	151.11	489.18	490.18	0.00	0.00	0.00
9,100.00	90.75	90.54	7,921.67	150.17	589.17	590.16	0.00	0.00	0.00
9,200.00	90.75	90.54	7,920.35	149.23	689.16	690.13	0.00	0.00	0.00
9,300.00	90.75	90.54	7,919.04	148.30	789.14	790.11	0.00	0.00	0.00
9,400.00	90.75	90.54	7,917.73	147.36	889.13	890.09	0.00	0.00	0.00
9,500.00	90.75	90.54	7,916.42	146.42	989.12	990.07	0.00	0.00	0.00
9,600.00	90.75	90.54	7,915.10	145.48	1,089.10	1,090.05	0.00	0.00	0.00
9,700.00	90.75	90.54	7,913.79	144.54	1,189.09	1,190.03	0.00	0.00	0.00
9,800.00	90.75	90.54	7,912.48	143.60	1,289.08	1,290.01	0.00	0.00	0.00
9,900.00	90.75	90.54	7,911.17	142.66	1,389.07	1,389.98	0.00	0.00	0.00
10,000.00	90.75	90.54	7,909.85	141.73	1,489.05	1,489.96	0.00	0.00	0.00
10,100.00	90.75	90.54	7,908.54	140.79	1,589.04	1,589.94	0.00	0.00	0.00
10,200.00	90.75	90.54	7,907.23	139.85	1,689.03	1,689.92	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
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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)	
10,300.00	90.75	90.54	7,905.92	138.91	1,789.01	1,789.90	0.00	0.00	0.00	
10,400.00	90.75	90.54	7,904.60	137.97	1,889.00	1,889.88	0.00	0.00	0.00	
10,500.00	90.75	90.54	7,903.29	137.03	1,988.99	1,989.86	0.00	0.00	0.00	
10,600.00	90.75	90.54	7,901.98	136.09	2,088.97	2,089.83	0.00	0.00	0.00	
10,700.00	90.75	90.54	7,900.67	135.15	2,188.96	2,189.81	0.00	0.00	0.00	
10,800.00	90.75	90.54	7,899.35	134.22	2,288.95	2,289.79	0.00	0.00	0.00	
10,900.00	90.75	90.54	7,898.04	133.28	2,388.94	2,389.77	0.00	0.00	0.00	
11,000.00	90.75	90.54	7,896.73	132.34	2,488.92	2,489.75	0.00	0.00	0.00	
11,100.00	90.75	90.54	7,895.42	131.40	2,588.91	2,589.73	0.00	0.00	0.00	
11,200.00	90.75	90.54	7,894.10	130.46	2,688.90	2,689.70	0.00	0.00	0.00	
11,300.00	90.75	90.54	7,892.79	129.52	2,788.88	2,789.68	0.00	0.00	0.00	
11,400.00	90.75	90.54	7,891.48	128.58	2,888.87	2,889.66	0.00	0.00	0.00	
11,500.00	90.75	90.54	7,890.17	127.64	2,988.86	2,989.64	0.00	0.00	0.00	
11,600.00	90.75	90.54	7,888.85	126.71	3,088.84	3,089.62	0.00	0.00	0.00	
11,700.00	90.75	90.54	7,887.54	125.77	3,188.83	3,189.60	0.00	0.00	0.00	
11,800.00	90.75	90.54	7,886.23	124.83	3,288.82	3,289.58	0.00	0.00	0.00	
11,900.00	90.75	90.54	7,884.92	123.89	3,388.80	3,389.55	0.00	0.00	0.00	
12,000.00	90.75	90.54	7,883.60	122.95	3,488.79	3,489.53	0.00	0.00	0.00	
12,100.00	90.75	90.54	7,882.29	122.01	3,588.78	3,589.51	0.00	0.00	0.00	
12,200.00	90.75	90.54	7,880.98	121.07	3,688.77	3,689.49	0.00	0.00	0.00	
12,300.00	90.75	90.54	7,879.67	120.14	3,788.75	3,789.47	0.00	0.00	0.00	
12,400.00	90.75	90.54	7,878.35	119.20	3,888.74	3,889.45	0.00	0.00	0.00	
12,500.00	90.75	90.54	7,877.04	118.26	3,988.73	3,989.43	0.00	0.00	0.00	
12,600.00	90.75	90.54	7,875.73	117.32	4,088.71	4,089.40	0.00	0.00	0.00	
12,700.00	90.75	90.54	7,874.42	116.38	4,188.70	4,189.38	0.00	0.00	0.00	
12,800.00	90.75	90.54	7,873.10	115.44	4,288.69	4,289.36	0.00	0.00	0.00	
12,900.00	90.75	90.54	7,871.79	114.50	4,388.67	4,389.34	0.00	0.00	0.00	
13,000.00	90.75	90.54	7,870.48	113.56	4,488.66	4,489.32	0.00	0.00	0.00	
13,100.00	90.75	90.54	7,869.17	112.63	4,588.65	4,589.30	0.00	0.00	0.00	
13,200.00	90.75	90.54	7,867.85	111.69	4,688.64	4,689.28	0.00	0.00	0.00	
13,300.00	90.75	90.54	7,866.54	110.75	4,788.62	4,789.25	0.00	0.00	0.00	
13,400.00	90.75	90.54	7,865.23	109.81	4,888.61	4,889.23	0.00	0.00	0.00	
13,500.00	90.75	90.54	7,863.92	108.87	4,988.60	4,989.21	0.00	0.00	0.00	
13,600.00	90.75	90.54	7,862.60	107.93	5,088.58	5,089.19	0.00	0.00	0.00	
13,700.00	90.75	90.54	7,861.29	106.99	5,188.57	5,189.17	0.00	0.00	0.00	
13,800.00	90.75	90.54	7,859.98	106.05	5,288.56	5,289.15	0.00	0.00	0.00	
13,900.00	90.75	90.54	7,858.67	105.12	5,388.54	5,389.12	0.00	0.00	0.00	
14,000.00	90.75	90.54	7,857.35	104.18	5,488.53	5,489.10	0.00	0.00	0.00	
14,100.00	90.75	90.54	7,856.04	103.24	5,588.52	5,589.08	0.00	0.00	0.00	
14,200.00	90.75	90.54	7,854.73	102.30	5,688.51	5,689.06	0.00	0.00	0.00	
14,300.00	90.75	90.54	7,853.42	101.36	5,788.49	5,789.04	0.00	0.00	0.00	
14,400.00	90.75	90.54	7,852.10	100.42	5,888.48	5,889.02	0.00	0.00	0.00	
14,500.00	90.75	90.54	7,850.79	99.48	5,988.47	5,989.00	0.00	0.00	0.00	
14,600.00	90.75	90.54	7,849.48	98.55	6,088.45	6,088.97	0.00	0.00	0.00	
14,700.00	90.75	90.54	7,848.17	97.61	6,188.44	6,188.95	0.00	0.00	0.00	
14,800.00	90.75	90.54	7,846.85	96.67	6,288.43	6,288.93	0.00	0.00	0.00	
14,900.00	90.75	90.54	7,845.54	95.73	6,388.41	6,388.91	0.00	0.00	0.00	
15,000.00	90.75	90.54	7,844.23	94.79	6,488.40	6,488.89	0.00	0.00	0.00	
15,100.00	90.75	90.54	7,842.92	93.85	6,588.39	6,588.87	0.00	0.00	0.00	
15,200.00	90.75	90.54	7,841.60	92.91	6,688.38	6,688.85	0.00	0.00	0.00	
15,300.00	90.75	90.54	7,840.29	91.97	6,788.36	6,788.82	0.00	0.00	0.00	
15,400.00	90.75	90.54	7,838.98	91.04	6,888.35	6,888.80	0.00	0.00	0.00	
15,500.00	90.75	90.54	7,837.67	90.10	6,988.34	6,988.78	0.00	0.00	0.00	
15,600.00	90.75	90.54	7,836.35	89.16	7,088.32	7,088.76	0.00	0.00	0.00	

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Planning Report

Database:	EDT 14 Central Planning	Local Co-ordinate Reference:	Well Bear 3-65 22-23 3DH
Company:	ConocoPhillips RBU Gold Data	TVD Reference:	WELL @ 5596.90ft (Original Well Elev)
Project:	Niobrara Central Zone	MD Reference:	WELL @ 5596.90ft (Original Well Elev)
Site:	Bear	North Reference:	True
Well:	Bear 3-65 22-23 3DH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Bear 3-65 22-23 3DH Rev.A		

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)
15,700.00	90.75	90.54	7,835.04	88.22	7,188.31	7,188.74	0.00	0.00	0.00
15,800.00	90.75	90.54	7,833.73	87.28	7,288.30	7,288.72	0.00	0.00	0.00
15,900.00	90.75	90.54	7,832.42	86.34	7,388.28	7,388.70	0.00	0.00	0.00
16,000.00	90.75	90.54	7,831.10	85.40	7,488.27	7,488.67	0.00	0.00	0.00
16,100.00	90.75	90.54	7,829.79	84.46	7,588.26	7,588.65	0.00	0.00	0.00
16,200.00	90.75	90.54	7,828.48	83.53	7,688.25	7,688.63	0.00	0.00	0.00
16,300.00	90.75	90.54	7,827.17	82.59	7,788.23	7,788.61	0.00	0.00	0.00
16,400.00	90.75	90.54	7,825.85	81.65	7,888.22	7,888.59	0.00	0.00	0.00
16,500.00	90.75	90.54	7,824.54	80.71	7,988.21	7,988.57	0.00	0.00	0.00
16,600.00	90.75	90.54	7,823.23	79.77	8,088.19	8,088.54	0.00	0.00	0.00
16,700.00	90.75	90.54	7,821.92	78.83	8,188.18	8,188.52	0.00	0.00	0.00
16,800.00	90.75	90.54	7,820.60	77.89	8,288.17	8,288.50	0.00	0.00	0.00
16,900.00	90.75	90.54	7,819.29	76.96	8,388.15	8,388.48	0.00	0.00	0.00
17,000.00	90.75	90.54	7,817.98	76.02	8,488.14	8,488.46	0.00	0.00	0.00
17,100.00	90.75	90.54	7,816.67	75.08	8,588.13	8,588.44	0.00	0.00	0.00
17,200.00	90.75	90.54	7,815.35	74.14	8,688.11	8,688.42	0.00	0.00	0.00
17,300.00	90.75	90.54	7,814.04	73.20	8,788.10	8,788.39	0.00	0.00	0.00
17,400.00	90.75	90.54	7,812.73	72.26	8,888.09	8,888.37	0.00	0.00	0.00
17,500.00	90.75	90.54	7,811.42	71.32	8,988.08	8,988.35	0.00	0.00	0.00
17,600.00	90.75	90.54	7,810.10	70.38	9,088.06	9,088.33	0.00	0.00	0.00
17,700.00	90.75	90.54	7,808.79	69.45	9,188.05	9,188.31	0.00	0.00	0.00
17,800.00	90.75	90.54	7,807.48	68.51	9,288.04	9,288.29	0.00	0.00	0.00
17,900.00	90.75	90.54	7,806.17	67.57	9,388.02	9,388.27	0.00	0.00	0.00
18,000.00	90.75	90.54	7,804.85	66.63	9,488.01	9,488.24	0.00	0.00	0.00
18,100.00	90.75	90.54	7,803.54	65.69	9,588.00	9,588.22	0.00	0.00	0.00
18,200.00	90.75	90.54	7,802.23	64.75	9,687.98	9,688.20	0.00	0.00	0.00
18,215.00	90.75	90.54	7,802.03	64.61	9,702.98	9,703.20	0.00	0.00	0.00
5 1/2" x 8 1/2"									
18,217.40	90.75	90.54	7,802.00	64.59	9,705.38	9,705.60	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Bear 3DH BHL	0.00	0.00	7,802.00	64.59	9,705.38	1,707,626.914	3,246,555.753	39° 46' 22.710 N	104° 37' 22.240 W
- plan hits target center									
- Point									
Bear 3DH BPI	0.00	0.00	7,931.00	156.85	-121.80	1,707,628.021	3,236,728.105	39° 46' 23.640 N	104° 39' 28.100 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (")	Hole Diameter (")
2,172.00	2,172.00	9 5/8"		9-5/8	12-1/4
18,215.00	7,802.03	5 1/2" x 8 1/2"		5-1/2	8-1/2



ConocoPhillips

Bear 3-65 22-23 3DH Rev.A

Ground Level: 5569.90
Surface Location Latitude: 39° 46' 22.090 N
Surface Location Longitude: 104° 39' 26.540 W
North Reference: True
WELL @ 5596.90ft (Original Well Elev)

North American Datum 1983
GRS 1980
US State Plane 1983
Colorado Central Zone

Well Profile Data

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2172.00	0.00	0.00	2172.00	0.00	0.00	0.00	0.00
4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00
6350.36	23.26	279.38	6308.14	50.59	-306.18	1.50	-305.84
7251.80	23.26	279.38	7136.34	108.61	-657.34	0.00	-656.60
8388.93	90.75	90.54	7931.00	156.85	-121.80	10.00	-120.76
18217.40	90.75	90.54	7802.00	64.59	9705.38	0.00	9705.60

West(-)/East(+) (2000 ft/in)

-2000 -1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 11000

Casing Depths

TVD	MD	Name	Size
2172.00	2172.00	9 5/8"	9-5/8
7802.03	18215.005	1/2" x 8 1/2"	5-1/2

22

23

SL 1376' FSL 583' FWL

TD at 18217.40

Bear 3-65 22-23 3DH

KOP 1485' FSL 74' FEL

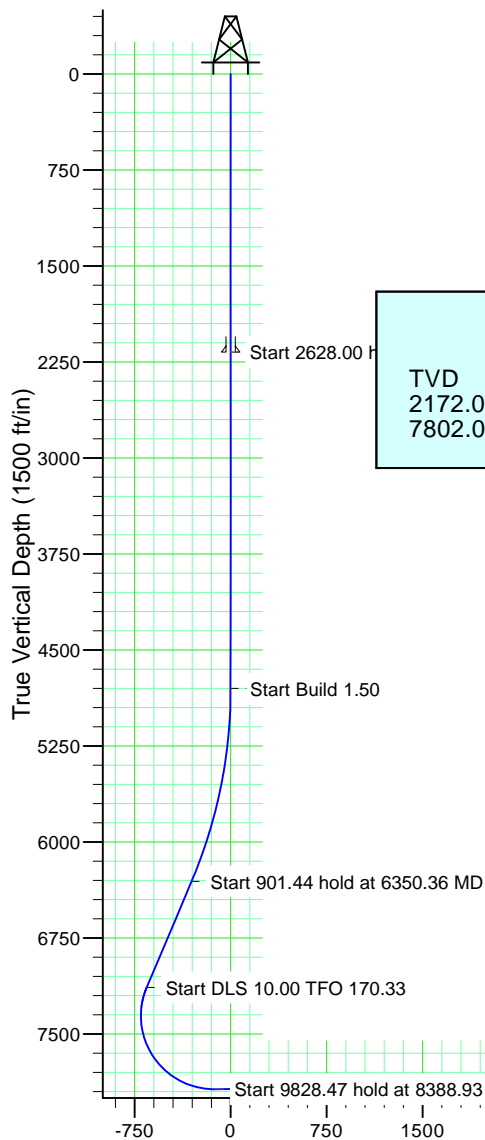
EPI 1532' FSL 460' FEL

BHL 1532' FSL 325' FEL

Section Lines

Wellbore Targets

Name	TVD	Latitude	Longitude
Bear 3DH BHL	7802.00	39° 46' 22.710 N	104° 37' 22.240 W
Bear 3DH BPI	7931.00	39° 46' 23.640 N	104° 39' 28.100 W



Vertical Section at 89.62° (1500 ft/in)

South(-)/North(+) (2000 ft/in)

4000
3000
2000
1000
0
-1000