

ConocoPhillips RBU Gold Data_Niobrara

Niobrara - CO Central Zone

Grande

Grande 4-65 20-19 3AH

Grande 4-65 20-19 3AH

Plan: Grande 4-65 20-19 3AH

Standard Planning Report

12 December, 2016

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Grande 4-65 20-19 3AH
Company:	ConocoPhillips RBU Gold Data_Niobrara	TVD Reference:	24' RKB @ 5641.80ft (24' RKB)
Project:	Niobrara - CO Central Zone	MD Reference:	24' RKB @ 5641.80ft (24' RKB)
Site:	Grande	North Reference:	True
Well:	Grande 4-65 20-19 3AH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Grande 4-65 20-19 3AH		
Design:	Grande 4-65 20-19 3AH		

Project	Niobrara - CO Central Zone, Arapahoe, Douglas, Elbert County - Colorado, Definitive (Gold) Database		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	Grande				
Site Position:		Northing:	1,679,554.079 usft	Latitude:	39° 41' 47.630 N
From:	Lat/Long	Easting:	3,220,569.758 usft	Longitude:	104° 42' 58.140 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.49 °

Well	Grande 4-65 20-19 3AH					
Well Position	+N/-S	-3,730.39 ft	Northing:	1,675,919.160 usft	Latitude:	39° 41' 10.740 N
	+E/-W	11,044.21 ft	Easting:	3,231,645.604 usft	Longitude:	104° 40' 36.870 W
Position Uncertainty		2.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,617.80 ft

Wellbore	Grande 4-65 20-19 3AH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	12/12/2016	8.33	66.37	52,088

Design	Grande 4-65 20-19 3AH			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	276.49

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	
2,266.00	0.00	0.00	2,266.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,974.81	10.63	339.31	2,970.75	61.35	-23.17	1.50	1.50	0.00	339.31	
7,461.65	10.63	339.31	7,380.56	835.77	-315.71	0.00	0.00	0.00	0.00	
8,324.89	90.07	270.04	7,908.00	928.91	-888.07	10.00	9.20	-8.02	-69.58	Grande 4-65 20-19 3/4
15,643.67	90.07	270.04	7,899.00	934.26	-8,206.84	0.00	0.00	0.00	0.00	Grande 4-65 20-19 3/4

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Planning Report

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Company:	ConocoPhillips RBU Gold Data_Niobrara	TVD Reference:	24' RKB @ 5641.80ft (24' RKB)
Project:	Niobrara - CO Central Zone	MD Reference:	24' RKB @ 5641.80ft (24' RKB)
Site:	Grande	North Reference:	True
Well:	Grande 4-65 20-19 3AH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Grande 4-65 20-19 3AH		
Design:	Grande 4-65 20-19 3AH		

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
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,266.00	0.00	0.00	2,266.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.51	339.31	2,300.00	0.14	-0.05	0.07	1.50	1.50	0.00
2,400.00	2.01	339.31	2,399.97	2.20	-0.83	1.07	1.50	1.50	0.00
2,500.00	3.51	339.31	2,499.85	6.70	-2.53	3.27	1.50	1.50	0.00
2,600.00	5.01	339.31	2,599.57	13.65	-5.16	6.67	1.50	1.50	0.00
2,700.00	6.51	339.31	2,699.07	23.04	-8.70	11.25	1.50	1.50	0.00
2,800.00	8.01	339.31	2,798.26	34.86	-13.17	17.03	1.50	1.50	0.00
2,900.00	9.51	339.31	2,897.09	49.11	-18.55	23.99	1.50	1.50	0.00
2,974.81	10.63	339.31	2,970.75	61.35	-23.17	29.96	1.50	1.50	0.00
3,000.00	10.63	339.31	2,995.51	65.69	-24.82	32.09	0.00	0.00	0.00
3,100.00	10.63	339.31	3,093.79	82.95	-31.34	40.52	0.00	0.00	0.00
3,200.00	10.63	339.31	3,192.07	100.21	-37.86	48.95	0.00	0.00	0.00
3,300.00	10.63	339.31	3,290.36	117.47	-44.38	57.38	0.00	0.00	0.00
3,400.00	10.63	339.31	3,388.64	134.73	-50.90	65.81	0.00	0.00	0.00
3,500.00	10.63	339.31	3,486.92	151.99	-57.42	74.24	0.00	0.00	0.00
3,600.00	10.63	339.31	3,585.21	169.25	-63.94	82.67	0.00	0.00	0.00
3,700.00	10.63	339.31	3,683.49	186.51	-70.46	91.10	0.00	0.00	0.00
3,800.00	10.63	339.31	3,781.77	203.77	-76.97	99.53	0.00	0.00	0.00
3,900.00	10.63	339.31	3,880.06	221.03	-83.49	107.96	0.00	0.00	0.00
4,000.00	10.63	339.31	3,978.34	238.29	-90.01	116.39	0.00	0.00	0.00
4,100.00	10.63	339.31	4,076.62	255.55	-96.53	124.82	0.00	0.00	0.00
4,200.00	10.63	339.31	4,174.90	272.81	-103.05	133.25	0.00	0.00	0.00
4,300.00	10.63	339.31	4,273.19	290.07	-109.57	141.68	0.00	0.00	0.00
4,400.00	10.63	339.31	4,371.47	307.33	-116.09	150.11	0.00	0.00	0.00
4,500.00	10.63	339.31	4,469.75	324.59	-122.61	158.54	0.00	0.00	0.00
4,600.00	10.63	339.31	4,568.04	341.85	-129.13	166.97	0.00	0.00	0.00
4,700.00	10.63	339.31	4,666.32	359.11	-135.65	175.40	0.00	0.00	0.00
4,800.00	10.63	339.31	4,764.60	376.37	-142.17	183.83	0.00	0.00	0.00
4,900.00	10.63	339.31	4,862.89	393.63	-148.69	192.26	0.00	0.00	0.00
5,000.00	10.63	339.31	4,961.17	410.89	-155.21	200.69	0.00	0.00	0.00
5,100.00	10.63	339.31	5,059.45	428.15	-161.73	209.12	0.00	0.00	0.00

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Wellbore:	Grande 4-65 20-19 3AH		
Design:	Grande 4-65 20-19 3AH		

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	10.63	339.31	5,157.74	445.41	-168.25	217.55	0.00	0.00	0.00	
5,300.00	10.63	339.31	5,256.02	462.67	-174.77	225.98	0.00	0.00	0.00	
5,400.00	10.63	339.31	5,354.30	479.93	-181.29	234.41	0.00	0.00	0.00	
5,500.00	10.63	339.31	5,452.59	497.19	-187.81	242.85	0.00	0.00	0.00	
5,600.00	10.63	339.31	5,550.87	514.45	-194.33	251.28	0.00	0.00	0.00	
5,700.00	10.63	339.31	5,649.15	531.71	-200.85	259.71	0.00	0.00	0.00	
5,800.00	10.63	339.31	5,747.44	548.97	-207.37	268.14	0.00	0.00	0.00	
5,900.00	10.63	339.31	5,845.72	566.23	-213.89	276.57	0.00	0.00	0.00	
6,000.00	10.63	339.31	5,944.00	583.49	-220.41	285.00	0.00	0.00	0.00	
6,100.00	10.63	339.31	6,042.29	600.75	-226.93	293.43	0.00	0.00	0.00	
6,200.00	10.63	339.31	6,140.57	618.01	-233.45	301.86	0.00	0.00	0.00	
6,300.00	10.63	339.31	6,238.85	635.27	-239.97	310.29	0.00	0.00	0.00	
6,400.00	10.63	339.31	6,337.13	652.53	-246.49	318.72	0.00	0.00	0.00	
6,500.00	10.63	339.31	6,435.42	669.79	-253.01	327.15	0.00	0.00	0.00	
6,600.00	10.63	339.31	6,533.70	687.05	-259.53	335.58	0.00	0.00	0.00	
6,700.00	10.63	339.31	6,631.98	704.31	-266.05	344.01	0.00	0.00	0.00	
6,800.00	10.63	339.31	6,730.27	721.57	-272.57	352.44	0.00	0.00	0.00	
6,900.00	10.63	339.31	6,828.55	738.83	-279.09	360.87	0.00	0.00	0.00	
7,000.00	10.63	339.31	6,926.83	756.09	-285.61	369.30	0.00	0.00	0.00	
7,100.00	10.63	339.31	7,025.12	773.35	-292.13	377.73	0.00	0.00	0.00	
7,200.00	10.63	339.31	7,123.40	790.61	-298.65	386.16	0.00	0.00	0.00	
7,300.00	10.63	339.31	7,221.68	807.87	-305.17	394.59	0.00	0.00	0.00	
7,400.00	10.63	339.31	7,319.97	825.13	-311.69	403.02	0.00	0.00	0.00	
7,461.65	10.63	339.31	7,380.56	835.77	-315.71	408.22	0.00	0.00	0.00	
7,500.00	12.49	322.46	7,418.14	842.38	-319.49	412.72	10.00	4.85	-43.92	
7,550.00	16.00	307.82	7,466.61	850.89	-328.23	422.37	10.00	7.01	-29.29	
7,600.00	20.13	298.67	7,514.15	859.25	-341.23	436.23	10.00	8.27	-18.29	
7,650.00	24.57	292.63	7,560.38	867.38	-358.39	454.20	10.00	8.89	-12.09	
7,700.00	29.19	288.37	7,604.97	875.23	-379.57	476.13	10.00	9.23	-8.52	
7,750.00	33.91	285.19	7,647.57	882.73	-404.62	501.86	10.00	9.43	-6.35	
7,800.00	38.69	282.72	7,687.86	889.83	-433.34	531.21	10.00	9.56	-4.95	
7,850.00	43.51	280.71	7,725.53	896.48	-465.52	563.93	10.00	9.65	-4.01	
7,900.00	48.37	279.03	7,760.29	902.61	-500.91	599.78	10.00	9.71	-3.36	
7,950.00	53.24	277.59	7,791.88	908.19	-539.24	638.50	10.00	9.75	-2.88	
8,000.00	58.13	276.32	7,820.06	913.18	-580.22	679.78	10.00	9.78	-2.54	
8,050.00	63.03	275.18	7,844.61	917.53	-623.54	723.32	10.00	9.80	-2.28	
8,100.00	67.94	274.13	7,865.35	921.22	-668.87	768.77	10.00	9.82	-2.09	
8,150.00	72.85	273.16	7,882.13	924.20	-715.86	815.80	10.00	9.83	-1.95	
8,200.00	77.77	272.23	7,894.80	926.48	-764.15	864.04	10.00	9.84	-1.85	
8,250.00	82.69	271.34	7,903.28	928.01	-813.39	913.14	10.00	9.84	-1.78	
8,300.00	87.62	270.47	7,907.50	928.80	-863.19	962.71	10.00	9.85	-1.74	
8,324.89	90.07	270.04	7,908.00	928.91	-888.07	987.44	10.00	9.85	-1.73	
8,400.00	90.07	270.04	7,907.91	928.96	-963.18	1,062.08	0.00	0.00	0.00	
8,500.00	90.07	270.04	7,907.78	929.04	-1,063.18	1,161.44	0.00	0.00	0.00	
8,600.00	90.07	270.04	7,907.66	929.11	-1,163.18	1,260.81	0.00	0.00	0.00	
8,700.00	90.07	270.04	7,907.54	929.18	-1,263.18	1,360.17	0.00	0.00	0.00	
8,800.00	90.07	270.04	7,907.42	929.26	-1,363.18	1,459.54	0.00	0.00	0.00	
8,900.00	90.07	270.04	7,907.29	929.33	-1,463.18	1,558.91	0.00	0.00	0.00	
9,000.00	90.07	270.04	7,907.17	929.40	-1,563.18	1,658.27	0.00	0.00	0.00	
9,100.00	90.07	270.04	7,907.05	929.48	-1,663.18	1,757.64	0.00	0.00	0.00	
9,200.00	90.07	270.04	7,906.92	929.55	-1,763.18	1,857.01	0.00	0.00	0.00	
9,300.00	90.07	270.04	7,906.80	929.62	-1,863.18	1,956.37	0.00	0.00	0.00	
9,400.00	90.07	270.04	7,906.68	929.70	-1,963.18	2,055.74	0.00	0.00	0.00	
9,500.00	90.07	270.04	7,906.56	929.77	-2,063.18	2,155.11	0.00	0.00	0.00	

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Wellbore:	Grande 4-65 20-19 3AH		
Design:	Grande 4-65 20-19 3AH		

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)
9,600.00	90.07	270.04	7,906.43	929.84	-2,163.18	2,254.47	0.00	0.00	0.00
9,700.00	90.07	270.04	7,906.31	929.91	-2,263.18	2,353.84	0.00	0.00	0.00
9,800.00	90.07	270.04	7,906.19	929.99	-2,363.18	2,453.21	0.00	0.00	0.00
9,900.00	90.07	270.04	7,906.06	930.06	-2,463.18	2,552.57	0.00	0.00	0.00
10,000.00	90.07	270.04	7,905.94	930.13	-2,563.18	2,651.94	0.00	0.00	0.00
10,100.00	90.07	270.04	7,905.82	930.21	-2,663.18	2,751.30	0.00	0.00	0.00
10,200.00	90.07	270.04	7,905.69	930.28	-2,763.18	2,850.67	0.00	0.00	0.00
10,300.00	90.07	270.04	7,905.57	930.35	-2,863.18	2,950.04	0.00	0.00	0.00
10,400.00	90.07	270.04	7,905.45	930.43	-2,963.18	3,049.40	0.00	0.00	0.00
10,500.00	90.07	270.04	7,905.33	930.50	-3,063.18	3,148.77	0.00	0.00	0.00
10,600.00	90.07	270.04	7,905.20	930.57	-3,163.18	3,248.14	0.00	0.00	0.00
10,700.00	90.07	270.04	7,905.08	930.65	-3,263.18	3,347.50	0.00	0.00	0.00
10,800.00	90.07	270.04	7,904.96	930.72	-3,363.18	3,446.87	0.00	0.00	0.00
10,900.00	90.07	270.04	7,904.83	930.79	-3,463.18	3,546.24	0.00	0.00	0.00
11,000.00	90.07	270.04	7,904.71	930.87	-3,563.18	3,645.60	0.00	0.00	0.00
11,100.00	90.07	270.04	7,904.59	930.94	-3,663.18	3,744.97	0.00	0.00	0.00
11,200.00	90.07	270.04	7,904.46	931.01	-3,763.18	3,844.34	0.00	0.00	0.00
11,300.00	90.07	270.04	7,904.34	931.08	-3,863.18	3,943.70	0.00	0.00	0.00
11,400.00	90.07	270.04	7,904.22	931.16	-3,963.18	4,043.07	0.00	0.00	0.00
11,500.00	90.07	270.04	7,904.10	931.23	-4,063.18	4,142.43	0.00	0.00	0.00
11,600.00	90.07	270.04	7,903.97	931.30	-4,163.18	4,241.80	0.00	0.00	0.00
11,700.00	90.07	270.04	7,903.85	931.38	-4,263.18	4,341.17	0.00	0.00	0.00
11,800.00	90.07	270.04	7,903.73	931.45	-4,363.18	4,440.53	0.00	0.00	0.00
11,900.00	90.07	270.04	7,903.60	931.52	-4,463.18	4,539.90	0.00	0.00	0.00
12,000.00	90.07	270.04	7,903.48	931.60	-4,563.18	4,639.27	0.00	0.00	0.00
12,100.00	90.07	270.04	7,903.36	931.67	-4,663.18	4,738.63	0.00	0.00	0.00
12,200.00	90.07	270.04	7,903.23	931.74	-4,763.18	4,838.00	0.00	0.00	0.00
12,300.00	90.07	270.04	7,903.11	931.82	-4,863.18	4,937.37	0.00	0.00	0.00
12,400.00	90.07	270.04	7,902.99	931.89	-4,963.18	5,036.73	0.00	0.00	0.00
12,500.00	90.07	270.04	7,902.87	931.96	-5,063.18	5,136.10	0.00	0.00	0.00
12,600.00	90.07	270.04	7,902.74	932.03	-5,163.18	5,235.47	0.00	0.00	0.00
12,700.00	90.07	270.04	7,902.62	932.11	-5,263.18	5,334.83	0.00	0.00	0.00
12,800.00	90.07	270.04	7,902.50	932.18	-5,363.18	5,434.20	0.00	0.00	0.00
12,900.00	90.07	270.04	7,902.37	932.25	-5,463.18	5,533.56	0.00	0.00	0.00
13,000.00	90.07	270.04	7,902.25	932.33	-5,563.18	5,632.93	0.00	0.00	0.00
13,100.00	90.07	270.04	7,902.13	932.40	-5,663.18	5,732.30	0.00	0.00	0.00
13,200.00	90.07	270.04	7,902.01	932.47	-5,763.18	5,831.66	0.00	0.00	0.00
13,300.00	90.07	270.04	7,901.88	932.55	-5,863.18	5,931.03	0.00	0.00	0.00
13,400.00	90.07	270.04	7,901.76	932.62	-5,963.18	6,030.40	0.00	0.00	0.00
13,500.00	90.07	270.04	7,901.64	932.69	-6,063.18	6,129.76	0.00	0.00	0.00
13,600.00	90.07	270.04	7,901.51	932.77	-6,163.18	6,229.13	0.00	0.00	0.00
13,700.00	90.07	270.04	7,901.39	932.84	-6,263.18	6,328.50	0.00	0.00	0.00
13,800.00	90.07	270.04	7,901.27	932.91	-6,363.18	6,427.86	0.00	0.00	0.00
13,900.00	90.07	270.04	7,901.14	932.98	-6,463.18	6,527.23	0.00	0.00	0.00
14,000.00	90.07	270.04	7,901.02	933.06	-6,563.18	6,626.60	0.00	0.00	0.00
14,100.00	90.07	270.04	7,900.90	933.13	-6,663.18	6,725.96	0.00	0.00	0.00
14,200.00	90.07	270.04	7,900.78	933.20	-6,763.18	6,825.33	0.00	0.00	0.00
14,300.00	90.07	270.04	7,900.65	933.28	-6,863.18	6,924.69	0.00	0.00	0.00
14,400.00	90.07	270.04	7,900.53	933.35	-6,963.18	7,024.06	0.00	0.00	0.00
14,500.00	90.07	270.04	7,900.41	933.42	-7,063.18	7,123.43	0.00	0.00	0.00
14,600.00	90.07	270.04	7,900.28	933.50	-7,163.18	7,222.79	0.00	0.00	0.00
14,700.00	90.07	270.04	7,900.16	933.57	-7,263.18	7,322.16	0.00	0.00	0.00
14,800.00	90.07	270.04	7,900.04	933.64	-7,363.18	7,421.53	0.00	0.00	0.00
14,900.00	90.07	270.04	7,899.91	933.72	-7,463.18	7,520.89	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Grande 4-65 20-19 3AH
Company:	ConocoPhillips RBU Gold Data_Niobrara	TVD Reference:	24' RKB @ 5641.80ft (24' RKB)
Project:	Niobrara - CO Central Zone	MD Reference:	24' RKB @ 5641.80ft (24' RKB)
Site:	Grande	North Reference:	True
Well:	Grande 4-65 20-19 3AH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Grande 4-65 20-19 3AH		
Design:	Grande 4-65 20-19 3AH		

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)	
15,000.00	90.07	270.04	7,899.79	933.79	-7,563.18	7,620.26	0.00	0.00	0.00	
15,100.00	90.07	270.04	7,899.67	933.86	-7,663.18	7,719.63	0.00	0.00	0.00	
15,200.00	90.07	270.04	7,899.55	933.93	-7,763.18	7,818.99	0.00	0.00	0.00	
15,300.00	90.07	270.04	7,899.42	934.01	-7,863.18	7,918.36	0.00	0.00	0.00	
15,400.00	90.07	270.04	7,899.30	934.08	-7,963.18	8,017.73	0.00	0.00	0.00	
15,500.00	90.07	270.04	7,899.18	934.15	-8,063.18	8,117.09	0.00	0.00	0.00	
15,600.00	90.07	270.04	7,899.05	934.23	-8,163.18	8,216.46	0.00	0.00	0.00	
15,643.67	90.07	270.04	7,899.00	934.26	-8,206.84	8,259.85	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										
Grande 4-65 20-19 3AH	0.00	0.00	7,899.00	934.26	-8,206.84	1,676,779.013	3,223,430.749	39° 41' 19.960 N	104° 42' 21.850 W	
- plan hits target center										
- Point										
Grande 4-65 20-19 3AH	0.00	0.00	7,908.00	928.91	-888.07	1,676,839.973	3,230,749.166	39° 41' 19.920 N	104° 40' 48.230 W	
- plan hits target center										
- Point										

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
2,166.00	2,166.00	Surface	9-5/8	13-1/2		
15,643.67	7,899.00	Production	5-1/2	8-3/4		



ConocoPhillips

Arapahoe County, Colorado

Grande 4-65 20-19 3AH

Wellbore Targets

Name	TVD	Latitude	Longitude
Grande 4-65 20-19 3AH BHL	7899.00	39° 41' 19.960 N	104° 42' 21.850 W
Grande 4-65 20-19 3AH BPI	7908.00	39° 41' 19.920 N	104° 40' 48.230 W

Casing Depths

TVD	MD	Name	Size
2166.00	2166.00	Surface	9-5/8
7899.00	15643.67	Production	5-1/2

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
2266.00	0.00	0.00	2266.00	0.00	0.00	0.00	0.00
2974.81	10.63	339.31	2970.75	61.35	-23.17	1.50	29.96
7461.65	10.63	339.31	7380.56	835.77	-315.71	0.00	408.22
8324.89	90.07	270.04	7908.00	928.91	-888.07	10.00	987.44
15643.67	90.07	270.04	7899.00	934.26	-8206.84	0.00	8259.85

