

# **ConocoPhillips RBU Gold Data**

**Niobrara - CO Central Zone**

**State La Plata Pad**

**State La Plata 5-65 13-15 4AH**

**State La Plata 5-65 13-15 4AH**

**Plan: State La Plata 5-65 13-15 4AH Rev A**

## **Standard Planning Report**

**23 May, 2016**

# ConocoPhillips

## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Well State La Plata 5-65 13-15 4AH
<b>Company:</b>	ConocoPhillips RBU Gold Data	<b>TVD Reference:</b>	RKB @ 5920.00ft (24' RKB)
<b>Project:</b>	Niobrara - CO Central Zone	<b>MD Reference:</b>	RKB @ 5920.00ft (24' RKB)
<b>Site:</b>	State La Plata Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	State La Plata 5-65 13-15 4AH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	State La Plata 5-65 13-15 4AH		
<b>Design:</b>	State La Plata 5-65 13-15 4AH Rev A		

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

Site	State La Plata Pad, Section 13, T5S - R65W				
Site Position:		Northing:	1,649,372.058 usft	Latitude:	39° 36' 46.789 N
From:	Lat/Long	Easting:	3,248,820.387 usft	Longitude:	104° 37' 0.491 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16"	Grid Convergence:	0.56 °

Well	State La Plata 5-65 13-15 4AH, Section 13, T5S - R65W					
Well Position	+N/-S	0.00 ft	Northing:	1,649,331.611 usft	Latitude:	39° 36' 46.389 N
	+E/-W	0.00 ft	Easting:	3,248,819.935 usft	Longitude:	104° 37' 0.502 W
Position Uncertainty		2.00 ft	Wellhead Elevation:	5,896.00 ft	Ground Level:	5,896.00 ft

<b>Wellbore</b>	State La Plata 5-65 13-15 4AH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	BGGM2016	5/17/2016	8.35	66.35	52,119

<b>Design</b>	State La Plata 5-65 13-15 4AH Rev A			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	267.80

<b>Plan Sections</b>										
<b>Measured</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg</b>	<b>Build</b>	<b>Turn</b>	<b>TFO</b>	<b>Target</b>
<b>Depth</b>	<b>(°)</b>	<b>(°)</b>	<b>Depth</b>	<b>(ft)</b>	<b>(ft)</b>	<b>Rate</b>	<b>Rate</b>	<b>Rate</b>	<b>(°)</b>	
<b>(ft)</b>			<b>(ft)</b>			<b>(°/100ft)</b>	<b>(°/100ft)</b>	<b>(°/100ft)</b>		
0.00	0.00	0.00	0.00	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	
3,303.22	10.55	112.47	3,299.26	-24.68	59.65	1.50	1.50	0.00	112.47	
6,737.56	10.55	112.47	6,675.56	-265.01	640.60	0.00	0.00	0.00	0.00	
7,264.98	0.00	0.00	7,200.00	-283.52	685.34	2.00	-2.00	0.00	180.00	
7,413.02	0.00	269.54	7,348.04	-283.52	685.34	0.00	0.00	0.00	269.54	
8,313.02	90.00	269.54	7,921.00	-288.14	112.40	10.00	10.00	0.00	-90.46	
17,964.95	90.00	269.54	7,921.00	-366.15	-9,539.22	0.00	0.00	0.00	-90.70	State La Plata 5-65 13-15 4AH

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## Planning Report

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<b>Company:</b>	ConocoPhillips RBU Gold Data	<b>TVD Reference:</b>	RKB @ 5920.00ft (24' RKB)
<b>Project:</b>	Niobrara - CO Central Zone	<b>MD Reference:</b>	RKB @ 5920.00ft (24' RKB)
<b>Site:</b>	State La Plata Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	State La Plata 5-65 13-15 4AH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	State La Plata 5-65 13-15 4AH		
<b>Design:</b>	State La Plata 5-65 13-15 4AH 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
1,911.00	0.00	0.00	1,911.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills									
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
2,135.00	0.00	0.00	2,135.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre Shale									
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
2,335.00	0.00	0.00	2,335.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Casing									
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	1.50	112.47	2,699.99	-0.50	1.21	-1.19	1.50	1.50	0.00
2,800.00	3.00	112.47	2,799.91	-2.00	4.84	-4.76	1.50	1.50	0.00
2,900.00	4.50	112.47	2,899.69	-4.50	10.88	-10.70	1.50	1.50	0.00
3,000.00	6.00	112.47	2,999.27	-8.00	19.34	-19.01	1.50	1.50	0.00
3,100.00	7.50	112.47	3,098.57	-12.49	30.20	-29.69	1.50	1.50	0.00
3,200.00	9.00	112.47	3,197.54	-17.98	43.46	-42.73	1.50	1.50	0.00
3,300.00	10.50	112.47	3,296.09	-24.45	59.10	-58.12	1.50	1.50	0.00
3,303.22	10.55	112.47	3,299.26	-24.68	59.65	-58.66	1.50	1.50	0.00
3,400.00	10.55	112.47	3,394.40	-31.45	76.02	-74.76	0.00	0.00	0.00
3,500.00	10.55	112.47	3,492.71	-38.45	92.93	-91.39	0.00	0.00	0.00
3,600.00	10.55	112.47	3,591.02	-45.44	109.85	-108.03	0.00	0.00	0.00
3,700.00	10.55	112.47	3,689.33	-52.44	126.77	-124.66	0.00	0.00	0.00
3,800.00	10.55	112.47	3,787.64	-59.44	143.68	-141.30	0.00	0.00	0.00
3,900.00	10.55	112.47	3,885.95	-66.44	160.60	-157.93	0.00	0.00	0.00
4,000.00	10.55	112.47	3,984.26	-73.44	177.52	-174.57	0.00	0.00	0.00
4,045.51	10.55	112.47	4,029.00	-76.62	185.21	-182.14	0.00	0.00	0.00
Niobrara									
4,100.00	10.55	112.47	4,082.57	-80.43	194.43	-191.20	0.00	0.00	0.00
4,158.42	10.55	112.47	4,140.00	-84.52	204.31	-200.92	0.00	0.00	0.00
Sharon Springs									

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<b>Wellbore:</b>	State La Plata 5-65 13-15 4AH		
<b>Design:</b>	State La Plata 5-65 13-15 4AH 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)
4,200.00	10.55	112.47	4,180.88	-87.43	211.35	-207.84	0.00	0.00	0.00
4,300.00	10.55	112.47	4,279.19	-94.43	228.26	-224.47	0.00	0.00	0.00
4,400.00	10.55	112.47	4,377.50	-101.43	245.18	-241.11	0.00	0.00	0.00
4,500.00	10.55	112.47	4,475.81	-108.43	262.10	-257.74	0.00	0.00	0.00
4,600.00	10.55	112.47	4,574.12	-115.43	279.01	-274.38	0.00	0.00	0.00
4,700.00	10.55	112.47	4,672.43	-122.42	295.93	-291.01	0.00	0.00	0.00
4,800.00	10.55	112.47	4,770.74	-129.42	312.84	-307.65	0.00	0.00	0.00
4,900.00	10.55	112.47	4,869.05	-136.42	329.76	-324.29	0.00	0.00	0.00
5,000.00	10.55	112.47	4,967.36	-143.42	346.68	-340.92	0.00	0.00	0.00
5,100.00	10.55	112.47	5,065.67	-150.42	363.59	-357.56	0.00	0.00	0.00
5,200.00	10.55	112.47	5,163.98	-157.41	380.51	-374.19	0.00	0.00	0.00
5,300.00	10.55	112.47	5,262.29	-164.41	397.42	-390.83	0.00	0.00	0.00
5,400.00	10.55	112.47	5,360.60	-171.41	414.34	-407.46	0.00	0.00	0.00
5,500.00	10.55	112.47	5,458.91	-178.41	431.26	-424.10	0.00	0.00	0.00
5,600.00	10.55	112.47	5,557.22	-185.41	448.17	-440.73	0.00	0.00	0.00
5,700.00	10.55	112.47	5,655.53	-192.40	465.09	-457.37	0.00	0.00	0.00
5,800.00	10.55	112.47	5,753.84	-199.40	482.01	-474.00	0.00	0.00	0.00
5,900.00	10.55	112.47	5,852.15	-206.40	498.92	-490.64	0.00	0.00	0.00
6,000.00	10.55	112.47	5,950.46	-213.40	515.84	-507.27	0.00	0.00	0.00
6,100.00	10.55	112.47	6,048.77	-220.40	532.75	-523.91	0.00	0.00	0.00
6,200.00	10.55	112.47	6,147.08	-227.39	549.67	-540.54	0.00	0.00	0.00
6,300.00	10.55	112.47	6,245.39	-234.39	566.59	-557.18	0.00	0.00	0.00
6,400.00	10.55	112.47	6,343.70	-241.39	583.50	-573.81	0.00	0.00	0.00
6,500.00	10.55	112.47	6,442.01	-248.39	600.42	-590.45	0.00	0.00	0.00
6,600.00	10.55	112.47	6,540.32	-255.39	617.33	-607.08	0.00	0.00	0.00
6,700.00	10.55	112.47	6,638.63	-262.38	634.25	-623.72	0.00	0.00	0.00
6,737.56	10.55	112.47	6,675.56	-265.01	640.60	-629.97	0.00	0.00	0.00
6,800.00	9.30	112.47	6,737.06	-269.13	650.55	-639.75	2.00	-2.00	0.00
6,900.00	7.30	112.47	6,836.01	-274.64	663.89	-652.86	2.00	-2.00	0.00
7,000.00	5.30	112.47	6,935.40	-278.84	674.02	-662.83	2.00	-2.00	0.00
7,100.00	3.30	112.47	7,035.11	-281.70	680.95	-669.65	2.00	-2.00	0.00
7,200.00	1.30	112.47	7,135.03	-283.24	684.66	-673.29	2.00	-2.00	0.00
7,264.98	0.00	0.00	7,200.00	-283.52	685.34	-673.96	2.00	-2.00	0.00
7,300.00	0.00	0.00	7,235.02	-283.52	685.34	-673.96	0.00	0.00	0.00
7,400.00	0.00	0.00	7,335.02	-283.52	685.34	-673.96	0.00	0.00	0.00
7,413.02	0.00	269.54	7,348.04	-283.52	685.34	-673.96	0.00	0.00	0.00
7,500.00	8.70	269.54	7,434.69	-283.57	678.75	-667.37	10.00	10.00	0.00
7,600.00	18.70	269.54	7,531.72	-283.76	655.10	-643.73	10.00	10.00	0.00
7,700.00	28.70	269.54	7,623.17	-284.09	614.96	-603.61	10.00	10.00	0.00
7,800.00	38.70	269.54	7,706.26	-284.53	559.55	-548.23	10.00	10.00	0.00
7,900.00	48.70	269.54	7,778.47	-285.09	490.55	-479.26	10.00	10.00	0.00
8,000.00	58.70	269.54	7,837.60	-285.74	410.07	-398.81	10.00	10.00	0.00
8,100.00	68.70	269.54	7,881.85	-286.46	320.54	-309.32	10.00	10.00	0.00
8,200.00	78.70	269.54	7,909.89	-287.23	224.68	-213.50	10.00	10.00	0.00
8,300.00	88.70	269.54	7,920.85	-288.03	125.42	-114.28	10.00	10.00	0.00
8,313.01	90.00	269.54	7,921.00	-288.14	112.40	-101.27	10.00	10.00	0.00
State La Plata 5-65 13-15 4AH - BPI									
8,400.00	90.00	269.54	7,921.00	-288.84	25.42	-14.32	0.00	0.00	0.00
8,500.00	90.00	269.54	7,921.00	-289.65	-74.58	85.63	0.00	0.00	0.00
8,600.00	90.00	269.54	7,921.00	-290.45	-174.57	185.58	0.00	0.00	0.00
8,700.00	90.00	269.54	7,921.00	-291.26	-274.57	285.54	0.00	0.00	0.00
8,800.00	90.00	269.54	7,921.00	-292.07	-374.57	385.49	0.00	0.00	0.00
8,900.00	90.00	269.54	7,921.00	-292.87	-474.56	485.45	0.00	0.00	0.00

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<b>Wellbore:</b>	State La Plata 5-65 13-15 4AH		
<b>Design:</b>	State La Plata 5-65 13-15 4AH 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)
9,000.00	90.00	269.54	7,921.00	-293.68	-574.56	585.40	0.00	0.00	0.00
9,100.00	90.00	269.54	7,921.00	-294.49	-674.56	685.35	0.00	0.00	0.00
9,200.00	90.00	269.54	7,921.00	-295.29	-774.55	785.31	0.00	0.00	0.00
9,300.00	90.00	269.54	7,921.00	-296.10	-874.55	885.26	0.00	0.00	0.00
9,400.00	90.00	269.54	7,921.00	-296.91	-974.55	985.22	0.00	0.00	0.00
9,500.00	90.00	269.54	7,921.00	-297.71	-1,074.54	1,085.17	0.00	0.00	0.00
9,600.00	90.00	269.54	7,921.00	-298.52	-1,174.54	1,185.13	0.00	0.00	0.00
9,700.00	90.00	269.54	7,921.00	-299.33	-1,274.54	1,285.08	0.00	0.00	0.00
9,800.00	90.00	269.54	7,921.00	-300.13	-1,374.53	1,385.03	0.00	0.00	0.00
9,900.00	90.00	269.54	7,921.00	-300.94	-1,474.53	1,484.99	0.00	0.00	0.00
10,000.00	90.00	269.54	7,921.00	-301.75	-1,574.53	1,584.94	0.00	0.00	0.00
10,100.00	90.00	269.54	7,921.00	-302.56	-1,674.52	1,684.90	0.00	0.00	0.00
10,200.00	90.00	269.54	7,921.00	-303.36	-1,774.52	1,784.85	0.00	0.00	0.00
10,300.00	90.00	269.54	7,921.00	-304.17	-1,874.52	1,884.80	0.00	0.00	0.00
10,400.00	90.00	269.54	7,921.00	-304.98	-1,974.51	1,984.76	0.00	0.00	0.00
10,500.00	90.00	269.54	7,921.00	-305.78	-2,074.51	2,084.71	0.00	0.00	0.00
10,600.00	90.00	269.54	7,921.00	-306.59	-2,174.51	2,184.67	0.00	0.00	0.00
10,700.00	90.00	269.54	7,921.00	-307.40	-2,274.50	2,284.62	0.00	0.00	0.00
10,800.00	90.00	269.54	7,921.00	-308.21	-2,374.50	2,384.57	0.00	0.00	0.00
10,900.00	90.00	269.54	7,921.00	-309.01	-2,474.50	2,484.53	0.00	0.00	0.00
11,000.00	90.00	269.54	7,921.00	-309.82	-2,574.49	2,584.48	0.00	0.00	0.00
11,100.00	90.00	269.54	7,921.00	-310.63	-2,674.49	2,684.44	0.00	0.00	0.00
11,200.00	90.00	269.54	7,921.00	-311.43	-2,774.49	2,784.39	0.00	0.00	0.00
11,300.00	90.00	269.54	7,921.00	-312.24	-2,874.48	2,884.35	0.00	0.00	0.00
11,400.00	90.00	269.54	7,921.00	-313.05	-2,974.48	2,984.30	0.00	0.00	0.00
11,500.00	90.00	269.54	7,921.00	-313.86	-3,074.48	3,084.25	0.00	0.00	0.00
11,600.00	90.00	269.54	7,921.00	-314.66	-3,174.47	3,184.21	0.00	0.00	0.00
11,700.00	90.00	269.54	7,921.00	-315.47	-3,274.47	3,284.16	0.00	0.00	0.00
11,800.00	90.00	269.54	7,921.00	-316.28	-3,374.47	3,384.12	0.00	0.00	0.00
11,900.00	90.00	269.54	7,921.00	-317.09	-3,474.46	3,484.07	0.00	0.00	0.00
12,000.00	90.00	269.54	7,921.00	-317.90	-3,574.46	3,584.02	0.00	0.00	0.00
12,100.00	90.00	269.54	7,921.00	-318.70	-3,674.46	3,683.98	0.00	0.00	0.00
12,200.00	90.00	269.54	7,921.00	-319.51	-3,774.45	3,783.93	0.00	0.00	0.00
12,300.00	90.00	269.54	7,921.00	-320.32	-3,874.45	3,883.89	0.00	0.00	0.00
12,400.00	90.00	269.54	7,921.00	-321.13	-3,974.45	3,983.84	0.00	0.00	0.00
12,500.00	90.00	269.54	7,921.00	-321.93	-4,074.45	4,083.79	0.00	0.00	0.00
12,600.00	90.00	269.54	7,921.00	-322.74	-4,174.44	4,183.75	0.00	0.00	0.00
12,700.00	90.00	269.54	7,921.00	-323.55	-4,274.44	4,283.70	0.00	0.00	0.00
12,800.00	90.00	269.54	7,921.00	-324.36	-4,374.44	4,383.66	0.00	0.00	0.00
12,900.00	90.00	269.54	7,921.00	-325.17	-4,474.43	4,483.61	0.00	0.00	0.00
13,000.00	90.00	269.54	7,921.00	-325.98	-4,574.43	4,583.57	0.00	0.00	0.00
13,100.00	90.00	269.54	7,921.00	-326.78	-4,674.43	4,683.52	0.00	0.00	0.00
13,200.00	90.00	269.54	7,921.00	-327.59	-4,774.42	4,783.47	0.00	0.00	0.00
13,300.00	90.00	269.54	7,921.00	-328.40	-4,874.42	4,883.43	0.00	0.00	0.00
13,400.00	90.00	269.54	7,921.00	-329.21	-4,974.42	4,983.38	0.00	0.00	0.00
13,500.00	90.00	269.54	7,921.00	-330.02	-5,074.41	5,083.34	0.00	0.00	0.00
13,600.00	90.00	269.54	7,921.00	-330.82	-5,174.41	5,183.29	0.00	0.00	0.00
13,700.00	90.00	269.54	7,921.00	-331.63	-5,274.41	5,283.24	0.00	0.00	0.00
13,800.00	90.00	269.54	7,921.00	-332.44	-5,374.40	5,383.20	0.00	0.00	0.00
13,900.00	90.00	269.54	7,921.00	-333.25	-5,474.40	5,483.15	0.00	0.00	0.00
14,000.00	90.00	269.54	7,921.00	-334.06	-5,574.40	5,583.11	0.00	0.00	0.00
14,100.00	90.00	269.54	7,921.00	-334.87	-5,674.39	5,683.06	0.00	0.00	0.00
14,200.00	90.00	269.54	7,921.00	-335.68	-5,774.39	5,783.02	0.00	0.00	0.00
14,300.00	90.00	269.54	7,921.00	-336.48	-5,874.39	5,882.97	0.00	0.00	0.00

# ConocoPhillips

## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Well State La Plata 5-65 13-15 4AH
<b>Company:</b>	ConocoPhillips RBU Gold Data	<b>TVD Reference:</b>	RKB @ 5920.00ft (24' RKB)
<b>Project:</b>	Niobrara - CO Central Zone	<b>MD Reference:</b>	RKB @ 5920.00ft (24' RKB)
<b>Site:</b>	State La Plata Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	State La Plata 5-65 13-15 4AH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	State La Plata 5-65 13-15 4AH		
<b>Design:</b>	State La Plata 5-65 13-15 4AH 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)
14,400.00	90.00	269.54	7,921.00	-337.29	-5,974.38	5,982.92	0.00	0.00	0.00
14,500.00	90.00	269.54	7,921.00	-338.10	-6,074.38	6,082.88	0.00	0.00	0.00
14,600.00	90.00	269.54	7,921.00	-338.91	-6,174.38	6,182.83	0.00	0.00	0.00
14,700.00	90.00	269.54	7,921.00	-339.72	-6,274.37	6,282.79	0.00	0.00	0.00
14,800.00	90.00	269.54	7,921.00	-340.53	-6,374.37	6,382.74	0.00	0.00	0.00
14,900.00	90.00	269.54	7,921.00	-341.34	-6,474.37	6,482.69	0.00	0.00	0.00
15,000.00	90.00	269.54	7,921.00	-342.15	-6,574.36	6,582.65	0.00	0.00	0.00
15,100.00	90.00	269.54	7,921.00	-342.95	-6,674.36	6,682.60	0.00	0.00	0.00
15,200.00	90.00	269.54	7,921.00	-343.76	-6,774.36	6,782.56	0.00	0.00	0.00
15,300.00	90.00	269.54	7,921.00	-344.57	-6,874.35	6,882.51	0.00	0.00	0.00
15,400.00	90.00	269.54	7,921.00	-345.38	-6,974.35	6,982.47	0.00	0.00	0.00
15,500.00	90.00	269.54	7,921.00	-346.19	-7,074.35	7,082.42	0.00	0.00	0.00
15,600.00	90.00	269.54	7,921.00	-347.00	-7,174.34	7,182.37	0.00	0.00	0.00
15,700.00	90.00	269.54	7,921.00	-347.81	-7,274.34	7,282.33	0.00	0.00	0.00
15,800.00	90.00	269.54	7,921.00	-348.62	-7,374.34	7,382.28	0.00	0.00	0.00
15,900.00	90.00	269.54	7,921.00	-349.43	-7,474.33	7,482.24	0.00	0.00	0.00
16,000.00	90.00	269.54	7,921.00	-350.24	-7,574.33	7,582.19	0.00	0.00	0.00
16,100.00	90.00	269.54	7,921.00	-351.05	-7,674.33	7,682.14	0.00	0.00	0.00
16,200.00	90.00	269.54	7,921.00	-351.86	-7,774.32	7,782.10	0.00	0.00	0.00
16,300.00	90.00	269.54	7,921.00	-352.67	-7,874.32	7,882.05	0.00	0.00	0.00
16,400.00	90.00	269.54	7,921.00	-353.47	-7,974.32	7,982.01	0.00	0.00	0.00
16,500.00	90.00	269.54	7,921.00	-354.28	-8,074.31	8,081.96	0.00	0.00	0.00
16,600.00	90.00	269.54	7,921.00	-355.09	-8,174.31	8,181.92	0.00	0.00	0.00
16,700.00	90.00	269.54	7,921.00	-355.90	-8,274.31	8,281.87	0.00	0.00	0.00
16,800.00	90.00	269.54	7,921.00	-356.71	-8,374.30	8,381.82	0.00	0.00	0.00
16,900.00	90.00	269.54	7,921.00	-357.52	-8,474.30	8,481.78	0.00	0.00	0.00
17,000.00	90.00	269.54	7,921.00	-358.33	-8,574.30	8,581.73	0.00	0.00	0.00
17,100.00	90.00	269.54	7,921.00	-359.14	-8,674.29	8,681.69	0.00	0.00	0.00
17,200.00	90.00	269.54	7,921.00	-359.95	-8,774.29	8,781.64	0.00	0.00	0.00
17,300.00	90.00	269.54	7,921.00	-360.76	-8,874.29	8,881.60	0.00	0.00	0.00
17,400.00	90.00	269.54	7,921.00	-361.57	-8,974.28	8,981.55	0.00	0.00	0.00
17,500.00	90.00	269.54	7,921.00	-362.38	-9,074.28	9,081.50	0.00	0.00	0.00
17,600.00	90.00	269.54	7,921.00	-363.19	-9,174.28	9,181.46	0.00	0.00	0.00
17,700.00	90.00	269.54	7,921.00	-364.00	-9,274.27	9,281.41	0.00	0.00	0.00
17,800.00	90.00	269.54	7,921.00	-364.81	-9,374.27	9,381.37	0.00	0.00	0.00
17,900.00	90.00	269.54	7,921.00	-365.62	-9,474.27	9,481.32	0.00	0.00	0.00
17,964.95	90.00	269.54	7,921.00	-366.15	-9,539.22	9,546.24	0.00	0.00	0.00
State La Plata 5-65 13-15 4AH - TBH									

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									
State La Plata 5-65 13-1 - plan hits target center - Point	0.00	0.00	7,921.00	-366.15	-9,539.22	1,648,965.473	3,239,280.966	39° 36' 43.670 N	104° 39' 2.430 W
State La Plata 5-65 13-1 - plan hits target center - Point	0.00	0.00	7,921.00	-288.14	112.40	1,649,043.482	3,248,932.336	39° 36' 43.531 N	104° 36' 59.101 W

# ConocoPhillips

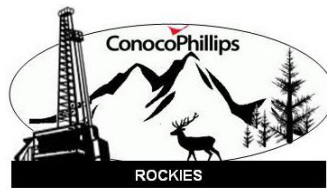
## Planning Report

<b>Database:</b>	EDM Central Planning	<b>Local Co-ordinate Reference:</b>	Well State La Plata 5-65 13-15 4AH
<b>Company:</b>	ConocoPhillips RBU Gold Data	<b>TVD Reference:</b>	RKB @ 5920.00ft (24' RKB)
<b>Project:</b>	Niobrara - CO Central Zone	<b>MD Reference:</b>	RKB @ 5920.00ft (24' RKB)
<b>Site:</b>	State La Plata Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	State La Plata 5-65 13-15 4AH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	State La Plata 5-65 13-15 4AH		
<b>Design:</b>	State La Plata 5-65 13-15 4AH Rev A		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
2,335.00	2,335.00	Surface Casing	9-5/8	13-1/2	
17,975.59		Production Casing	5-1/2	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,911.00	1,911.00	Fox Hills		0.00	
4,045.51	4,029.00	Niobrara		0.00	
2,135.00	2,135.00	Pierre Shale		0.00	
4,158.42	4,140.00	Sharon Springs		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,000.00	2,000.00	0.00	0.00	SHL: 1,280' FSL & 1,688' FWL	
7,413.02	7,348.04	-283.52	685.34	KOP: 990' FSL & 2,373 FWL	
8,313.02	7,921.00	-288.14	112.40	BPI: 990' FSL & 1,800' FWL	
17,964.95	7,921.00	-366.15	-9,539.22	TBH: 990' FSL & 2,480' FEL	



State La Plata 5-65 13-15 4AH  
State La Plata 5-65 13-15 4AH Rev A  
Arapahoe County, CO

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00
3	3303.22	10.55	112.47	3299.26	-24.68	59.65	1.50	112.47	-58.66
4	6737.56	10.55	112.47	6675.56	-265.01	640.60	0.00	0.00	-629.97
5	7264.98	0.00	0.00	7200.00	-283.52	685.34	2.00	180.00	-673.96
6	7413.02	0.00	269.54	7348.04	-283.52	685.34	0.00	269.54	-673.96
7	8313.02	90.00	269.54	7921.00	-288.14	112.40	10.00	-90.46	-101.27
8	17964.95	90.00	269.54	7921.00	-366.15	-9539.22	0.00	-90.70	9546.24

