

ConocoPhillips RBU Gold Data_Niobrara

Niobrara - CO Central Zone

State Bierstadt 0465 3435

State Bierstadt 4-65 35-34 1CH

State Bierstadt 4-65 35-34 1CH

Plan: State Bierstadt 4-65 35-34 1CH

Standard Planning Report

21 March, 2017

ConocoPhillips

Planning Report

Database:	EDT 14 Central Planning	Local Co-ordinate Reference:	Well State Bierstadt 4-65 35-34 1CH
Company:	ConocoPhillips RBU Gold Data_Niobrara	TVD Reference:	24' RKB @ 5896.30ft (24' RKB)
Project:	Niobrara - CO Central Zone	MD Reference:	24' RKB @ 5896.30ft (24' RKB)
Site:	State Bierstadt 0465 3435	North Reference:	True
Well:	State Bierstadt 4-65 35-34 1CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Bierstadt 4-65 35-34 1CH		
Design:	State Bierstadt 4-65 35-34 1CH		

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	State Bierstadt 0465 3435			
Site Position:		Northing:	1,669,080.226 usft	Latitude: 39° 40' 2.708 N
From:	Lat/Long	Easting:	3,236,563.120 usft	Longitude: 104° 39' 34.780 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: 0.53 °

Well	State Bierstadt 4-65 35-34 1CH			
Well Position	+N/-S	-1,244.55 ft	Northing:	1,667,927.086 usft
	+E/-W	9,873.91 ft	Easting:	3,246,447.951 usft
Position Uncertainty		2.00 ft	Wellhead Elevation:	0.00 ft
			Ground Level:	5,872.30 ft

Wellbore	State Bierstadt 4-65 35-34 1CH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	1/26/2017	8.16	66.27	51,978.43733308

Design	State Bierstadt 4-65 35-34 1CH			
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	272.27

Plan Survey Tool Program	Date	3/21/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	2,276.00	State Bierstadt 4-65 35-34 1CH (S)	GYD_DP_MS Gyrodata gyro-compassing anc
2	2,276.00	16,783.81	State Bierstadt 4-65 35-34 1CH (S)	MWD+IFR1+MS_CoP Fixed:v2:Eagleford, crustal dec

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	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,508.21	15.12	53.60	6,496.54	78.50	106.48	1.50	1.50	0.00	53.60	
7,300.89	15.12	53.60	7,261.77	201.21	272.94	0.00	0.00	0.00	0.00	
8,316.40	89.46	270.23	7,946.00	312.68	-281.53	10.00	7.32	-14.12	-142.49	State Bierstadt 4-65 3
16,783.81	89.46	270.23	8,026.00	346.55	-8,748.49	0.00	0.00	0.00	0.00	State Bierstadt 4-65 3

ConocoPhillips

Planning Report

Database:	EDT 14 Central Planning	Local Co-ordinate Reference:	Well State Bierstadt 4-65 35-34 1CH
Company:	ConocoPhillips RBU Gold Data_Niobrara	TVD Reference:	24' RKB @ 5896.30ft (24' RKB)
Project:	Niobrara - CO Central Zone	MD Reference:	24' RKB @ 5896.30ft (24' RKB)
Site:	State Bierstadt 0465 3435	North Reference:	True
Well:	State Bierstadt 4-65 35-34 1CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Bierstadt 4-65 35-34 1CH		
Design:	State Bierstadt 4-65 35-34 1CH		

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
2,276.00	0.00	0.00	2,276.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
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	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 14 Central Planning	Local Co-ordinate Reference:	Well State Bierstadt 4-65 35-34 1CH
Company:	ConocoPhillips RBU Gold Data_Niobrara	TVD Reference:	24' RKB @ 5896.30ft (24' RKB)
Project:	Niobrara - CO Central Zone	MD Reference:	24' RKB @ 5896.30ft (24' RKB)
Site:	State Bierstadt 0465 3435	North Reference:	True
Well:	State Bierstadt 4-65 35-34 1CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Bierstadt 4-65 35-34 1CH		
Design:	State Bierstadt 4-65 35-34 1CH		

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	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	1.50	53.60	5,599.99	0.78	1.05	-1.02	1.50	1.50	0.00
5,700.00	3.00	53.60	5,699.91	3.11	4.21	-4.09	1.50	1.50	0.00
5,800.00	4.50	53.60	5,799.69	6.99	9.48	-9.19	1.50	1.50	0.00
5,900.00	6.00	53.60	5,899.27	12.42	16.84	-16.34	1.50	1.50	0.00
6,000.00	7.50	53.60	5,998.57	19.39	26.30	-25.52	1.50	1.50	0.00
6,100.00	9.00	53.60	6,097.54	27.90	37.85	-36.72	1.50	1.50	0.00
6,200.00	10.50	53.60	6,196.09	37.95	51.48	-49.94	1.50	1.50	0.00
6,300.00	12.00	53.60	6,294.16	49.53	67.19	-65.17	1.50	1.50	0.00
6,400.00	13.50	53.60	6,391.70	62.62	84.95	-82.41	1.50	1.50	0.00
6,508.21	15.12	53.60	6,496.54	78.50	106.48	-103.29	1.50	1.50	0.00
6,600.00	15.12	53.60	6,585.16	92.71	125.76	-121.99	0.00	0.00	0.00
6,700.00	15.12	53.60	6,681.69	108.19	146.76	-142.36	0.00	0.00	0.00
6,800.00	15.12	53.60	6,778.23	123.67	167.76	-162.73	0.00	0.00	0.00
6,900.00	15.12	53.60	6,874.77	139.15	188.76	-183.10	0.00	0.00	0.00
7,000.00	15.12	53.60	6,971.30	154.63	209.76	-203.47	0.00	0.00	0.00
7,100.00	15.12	53.60	7,067.84	170.11	230.76	-223.84	0.00	0.00	0.00
7,200.00	15.12	53.60	7,164.38	185.59	251.76	-244.21	0.00	0.00	0.00
7,300.89	15.12	53.60	7,261.77	201.21	272.94	-264.76	0.00	0.00	0.00
7,350.00	11.61	38.59	7,309.56	208.88	281.19	-272.70	10.00	-7.15	-30.57
7,400.00	9.40	13.67	7,358.74	216.78	285.29	-276.49	10.00	-4.43	-49.84
7,450.00	9.56	342.96	7,408.09	224.72	285.04	-275.92	10.00	0.33	-61.41
7,500.00	12.00	319.33	7,457.23	232.64	280.43	-271.00	10.00	4.88	-47.27
7,550.00	15.69	305.08	7,505.78	240.48	271.51	-261.77	10.00	7.38	-28.50
7,600.00	19.95	296.45	7,553.38	248.17	258.33	-248.30	10.00	8.52	-17.25
7,650.00	24.48	290.83	7,599.66	255.66	240.99	-230.68	10.00	9.06	-11.24
7,700.00	29.16	286.90	7,644.27	262.89	219.64	-209.06	10.00	9.35	-7.86
7,750.00	33.92	283.98	7,686.87	269.81	194.43	-183.60	10.00	9.53	-5.84
7,800.00	38.74	281.71	7,727.14	276.36	165.55	-154.49	10.00	9.63	-4.54
7,850.00	43.59	279.87	7,764.78	282.49	133.23	-121.95	10.00	9.70	-3.68
7,900.00	48.47	278.34	7,799.48	288.16	97.71	-86.23	10.00	9.75	-3.07
7,950.00	53.36	277.01	7,831.00	293.33	59.26	-47.60	10.00	9.79	-2.64
8,000.00	58.27	275.85	7,859.08	297.95	18.17	-6.36	10.00	9.81	-2.32
8,050.00	63.18	274.81	7,883.52	301.99	-25.24	37.18	10.00	9.83	-2.09
8,100.00	68.11	273.85	7,904.14	305.42	-70.65	82.68	10.00	9.85	-1.92
8,150.00	73.04	272.96	7,920.76	308.21	-117.70	129.81	10.00	9.86	-1.79
8,200.00	77.97	272.11	7,933.27	310.35	-166.05	178.20	10.00	9.86	-1.70
8,250.00	82.90	271.29	7,941.58	311.80	-215.32	227.49	10.00	9.87	-1.63
8,300.00	87.84	270.49	7,945.61	312.58	-265.13	277.30	10.00	9.87	-1.60
8,316.40	89.46	270.23	7,946.00	312.68	-281.53	293.68	10.00	9.87	-1.59
8,400.00	89.46	270.23	7,946.79	313.01	-365.12	377.23	0.00	0.00	0.00
8,500.00	89.46	270.23	7,947.73	313.41	-465.12	477.16	0.00	0.00	0.00
8,600.00	89.46	270.23	7,948.68	313.81	-565.11	577.09	0.00	0.00	0.00
8,700.00	89.46	270.23	7,949.62	314.21	-665.11	677.02	0.00	0.00	0.00
8,800.00	89.46	270.23	7,950.57	314.61	-765.10	776.95	0.00	0.00	0.00
8,900.00	89.46	270.23	7,951.51	315.02	-865.10	876.89	0.00	0.00	0.00
9,000.00	89.46	270.23	7,952.46	315.42	-965.09	976.82	0.00	0.00	0.00
9,100.00	89.46	270.23	7,953.40	315.82	-1,065.09	1,076.75	0.00	0.00	0.00
9,200.00	89.46	270.23	7,954.35	316.22	-1,165.08	1,176.68	0.00	0.00	0.00
9,300.00	89.46	270.23	7,955.29	316.62	-1,265.07	1,276.62	0.00	0.00	0.00
9,400.00	89.46	270.23	7,956.24	317.02	-1,365.07	1,376.55	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 14 Central Planning	Local Co-ordinate Reference:	Well State Bierstadt 4-65 35-34 1CH
Company:	ConocoPhillips RBU Gold Data_Niobrara	TVD Reference:	24' RKB @ 5896.30ft (24' RKB)
Project:	Niobrara - CO Central Zone	MD Reference:	24' RKB @ 5896.30ft (24' RKB)
Site:	State Bierstadt 0465 3435	North Reference:	True
Well:	State Bierstadt 4-65 35-34 1CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Bierstadt 4-65 35-34 1CH		
Design:	State Bierstadt 4-65 35-34 1CH		

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)
9,500.00	89.46	270.23	7,957.18	317.42	-1,465.06	1,476.48	0.00	0.00	0.00
9,600.00	89.46	270.23	7,958.13	317.82	-1,565.06	1,576.41	0.00	0.00	0.00
9,700.00	89.46	270.23	7,959.07	318.22	-1,665.05	1,676.34	0.00	0.00	0.00
9,800.00	89.46	270.23	7,960.02	318.62	-1,765.05	1,776.28	0.00	0.00	0.00
9,900.00	89.46	270.23	7,960.96	319.02	-1,865.04	1,876.21	0.00	0.00	0.00
10,000.00	89.46	270.23	7,961.91	319.42	-1,965.04	1,976.14	0.00	0.00	0.00
10,100.00	89.46	270.23	7,962.85	319.82	-2,065.03	2,076.07	0.00	0.00	0.00
10,200.00	89.46	270.23	7,963.80	320.22	-2,165.03	2,176.01	0.00	0.00	0.00
10,300.00	89.46	270.23	7,964.74	320.62	-2,265.02	2,275.94	0.00	0.00	0.00
10,400.00	89.46	270.23	7,965.69	321.02	-2,365.02	2,375.87	0.00	0.00	0.00
10,500.00	89.46	270.23	7,966.63	321.42	-2,465.01	2,475.80	0.00	0.00	0.00
10,600.00	89.46	270.23	7,967.58	321.82	-2,565.01	2,575.73	0.00	0.00	0.00
10,700.00	89.46	270.23	7,968.52	322.22	-2,665.00	2,675.67	0.00	0.00	0.00
10,800.00	89.46	270.23	7,969.47	322.62	-2,765.00	2,775.60	0.00	0.00	0.00
10,900.00	89.46	270.23	7,970.41	323.02	-2,864.99	2,875.53	0.00	0.00	0.00
11,000.00	89.46	270.23	7,971.35	323.42	-2,964.99	2,975.46	0.00	0.00	0.00
11,100.00	89.46	270.23	7,972.30	323.82	-3,064.98	3,075.40	0.00	0.00	0.00
11,200.00	89.46	270.23	7,973.24	324.22	-3,164.97	3,175.33	0.00	0.00	0.00
11,300.00	89.46	270.23	7,974.19	324.62	-3,264.97	3,275.26	0.00	0.00	0.00
11,400.00	89.46	270.23	7,975.13	325.02	-3,364.96	3,375.19	0.00	0.00	0.00
11,500.00	89.46	270.23	7,976.08	325.42	-3,464.96	3,475.12	0.00	0.00	0.00
11,600.00	89.46	270.23	7,977.02	325.82	-3,564.95	3,575.06	0.00	0.00	0.00
11,700.00	89.46	270.23	7,977.97	326.22	-3,664.95	3,674.99	0.00	0.00	0.00
11,800.00	89.46	270.23	7,978.91	326.62	-3,764.94	3,774.92	0.00	0.00	0.00
11,900.00	89.46	270.23	7,979.86	327.02	-3,864.94	3,874.85	0.00	0.00	0.00
12,000.00	89.46	270.23	7,980.80	327.42	-3,964.93	3,974.79	0.00	0.00	0.00
12,100.00	89.46	270.23	7,981.75	327.82	-4,064.93	4,074.72	0.00	0.00	0.00
12,200.00	89.46	270.23	7,982.69	328.22	-4,164.92	4,174.65	0.00	0.00	0.00
12,300.00	89.46	270.23	7,983.64	328.62	-4,264.92	4,274.58	0.00	0.00	0.00
12,400.00	89.46	270.23	7,984.58	329.02	-4,364.91	4,374.51	0.00	0.00	0.00
12,500.00	89.46	270.23	7,985.53	329.42	-4,464.91	4,474.45	0.00	0.00	0.00
12,600.00	89.46	270.23	7,986.47	329.82	-4,564.90	4,574.38	0.00	0.00	0.00
12,700.00	89.46	270.23	7,987.42	330.22	-4,664.90	4,674.31	0.00	0.00	0.00
12,800.00	89.46	270.23	7,988.36	330.62	-4,764.89	4,774.24	0.00	0.00	0.00
12,900.00	89.46	270.23	7,989.31	331.02	-4,864.89	4,874.18	0.00	0.00	0.00
13,000.00	89.46	270.23	7,990.25	331.42	-4,964.88	4,974.11	0.00	0.00	0.00
13,100.00	89.46	270.23	7,991.20	331.82	-5,064.87	5,074.04	0.00	0.00	0.00
13,200.00	89.46	270.23	7,992.14	332.22	-5,164.87	5,173.97	0.00	0.00	0.00
13,300.00	89.46	270.23	7,993.09	332.62	-5,264.86	5,273.90	0.00	0.00	0.00
13,400.00	89.46	270.23	7,994.03	333.02	-5,364.86	5,373.84	0.00	0.00	0.00
13,500.00	89.46	270.23	7,994.97	333.42	-5,464.85	5,473.77	0.00	0.00	0.00
13,600.00	89.46	270.23	7,995.92	333.82	-5,564.85	5,573.70	0.00	0.00	0.00
13,700.00	89.46	270.23	7,996.86	334.22	-5,664.84	5,673.63	0.00	0.00	0.00
13,800.00	89.46	270.23	7,997.81	334.62	-5,764.84	5,773.57	0.00	0.00	0.00
13,900.00	89.46	270.23	7,998.75	335.02	-5,864.83	5,873.50	0.00	0.00	0.00
14,000.00	89.46	270.23	7,999.70	335.42	-5,964.83	5,973.43	0.00	0.00	0.00
14,100.00	89.46	270.23	8,000.64	335.82	-6,064.82	6,073.36	0.00	0.00	0.00
14,200.00	89.46	270.23	8,001.59	336.22	-6,164.82	6,173.29	0.00	0.00	0.00
14,300.00	89.46	270.23	8,002.53	336.62	-6,264.81	6,273.23	0.00	0.00	0.00
14,400.00	89.46	270.23	8,003.48	337.02	-6,364.81	6,373.16	0.00	0.00	0.00
14,500.00	89.46	270.23	8,004.42	337.42	-6,464.80	6,473.09	0.00	0.00	0.00
14,600.00	89.46	270.23	8,005.37	337.82	-6,564.80	6,573.02	0.00	0.00	0.00
14,700.00	89.46	270.23	8,006.31	338.22	-6,664.79	6,672.95	0.00	0.00	0.00
14,800.00	89.46	270.23	8,007.26	338.62	-6,764.79	6,772.89	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 14 Central Planning	Local Co-ordinate Reference:	Well State Bierstadt 4-65 35-34 1CH
Company:	ConocoPhillips RBU Gold Data_Niobrara	TVD Reference:	24' RKB @ 5896.30ft (24' RKB)
Project:	Niobrara - CO Central Zone	MD Reference:	24' RKB @ 5896.30ft (24' RKB)
Site:	State Bierstadt 0465 3435	North Reference:	True
Well:	State Bierstadt 4-65 35-34 1CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Bierstadt 4-65 35-34 1CH		
Design:	State Bierstadt 4-65 35-34 1CH		

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)
14,900.00	89.46	270.23	8,008.20	339.02	-6,864.78	6,872.82	0.00	0.00	0.00
15,000.00	89.46	270.23	8,009.15	339.42	-6,964.77	6,972.75	0.00	0.00	0.00
15,100.00	89.46	270.23	8,010.09	339.82	-7,064.77	7,072.68	0.00	0.00	0.00
15,200.00	89.46	270.23	8,011.04	340.22	-7,164.76	7,172.62	0.00	0.00	0.00
15,300.00	89.46	270.23	8,011.98	340.62	-7,264.76	7,272.55	0.00	0.00	0.00
15,400.00	89.46	270.23	8,012.93	341.02	-7,364.75	7,372.48	0.00	0.00	0.00
15,500.00	89.46	270.23	8,013.87	341.42	-7,464.75	7,472.41	0.00	0.00	0.00
15,600.00	89.46	270.23	8,014.82	341.82	-7,564.74	7,572.34	0.00	0.00	0.00
15,700.00	89.46	270.23	8,015.76	342.22	-7,664.74	7,672.28	0.00	0.00	0.00
15,800.00	89.46	270.23	8,016.71	342.62	-7,764.73	7,772.21	0.00	0.00	0.00
15,900.00	89.46	270.23	8,017.65	343.02	-7,864.73	7,872.14	0.00	0.00	0.00
16,000.00	89.46	270.23	8,018.59	343.42	-7,964.72	7,972.07	0.00	0.00	0.00
16,100.00	89.46	270.23	8,019.54	343.82	-8,064.72	8,072.01	0.00	0.00	0.00
16,200.00	89.46	270.23	8,020.48	344.22	-8,164.71	8,171.94	0.00	0.00	0.00
16,300.00	89.46	270.23	8,021.43	344.62	-8,264.71	8,271.87	0.00	0.00	0.00
16,400.00	89.46	270.23	8,022.37	345.02	-8,364.70	8,371.80	0.00	0.00	0.00
16,500.00	89.46	270.23	8,023.32	345.42	-8,464.70	8,471.73	0.00	0.00	0.00
16,600.00	89.46	270.23	8,024.26	345.82	-8,564.69	8,571.67	0.00	0.00	0.00
16,700.00	89.46	270.23	8,025.21	346.22	-8,664.69	8,671.60	0.00	0.00	0.00
16,783.81	89.46	270.23	8,026.00	346.55	-8,748.49	8,755.35	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									
State Bierstadt 4-65 35-34 1CH - plan hits target center - Point	0.00	0.00	7,946.00	312.68	-281.53	1,668,237.033	3,246,163.427	39° 39' 53.480 N	104° 37' 32.120 W
State Bierstadt 4-65 35-34 1CH - plan hits target center - Point	0.00	0.00	8,026.00	346.55	-8,748.49	1,668,189.318	3,237,696.688	39° 39' 53.800 N	104° 39' 20.390 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
2,276.00	2,276.00	9 5/8"	9-5/8	12-1/4	
16,783.81	8,026.00	5 1/2" x 8 3/4"	5-1/2	8-3/4	



ConocoPhillips

Arapahoe County, Colorado

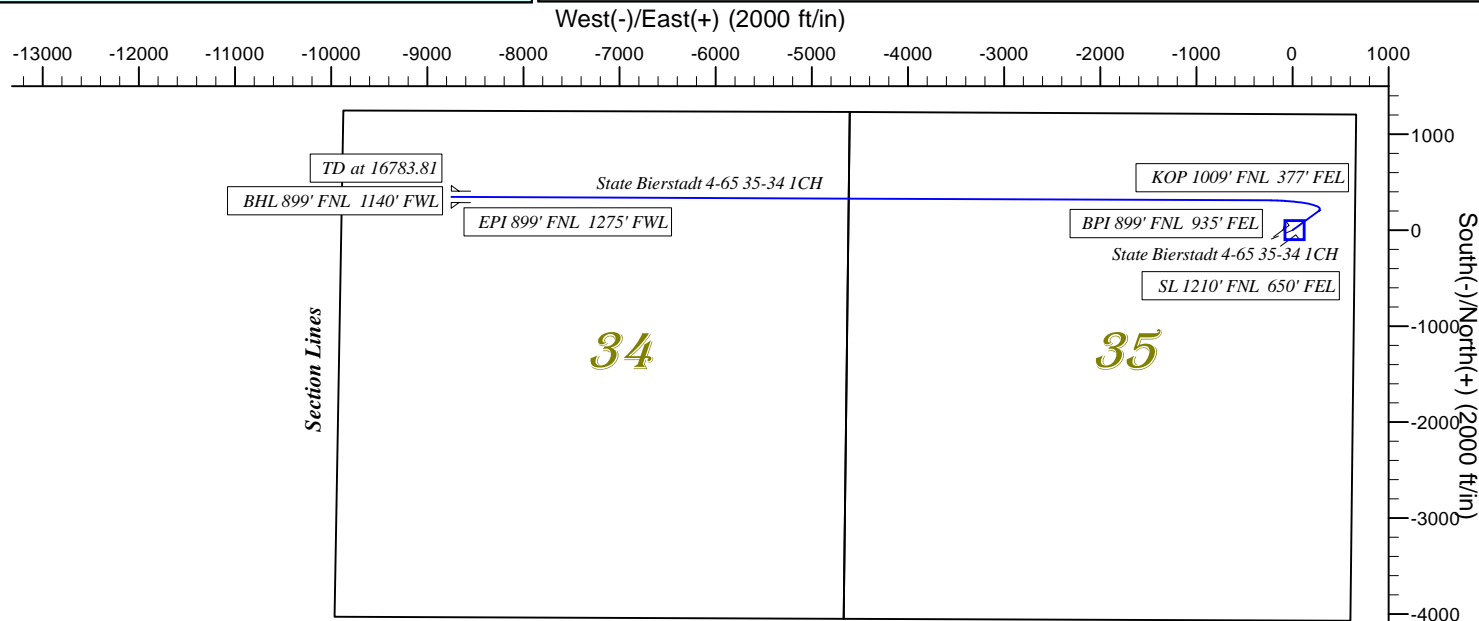
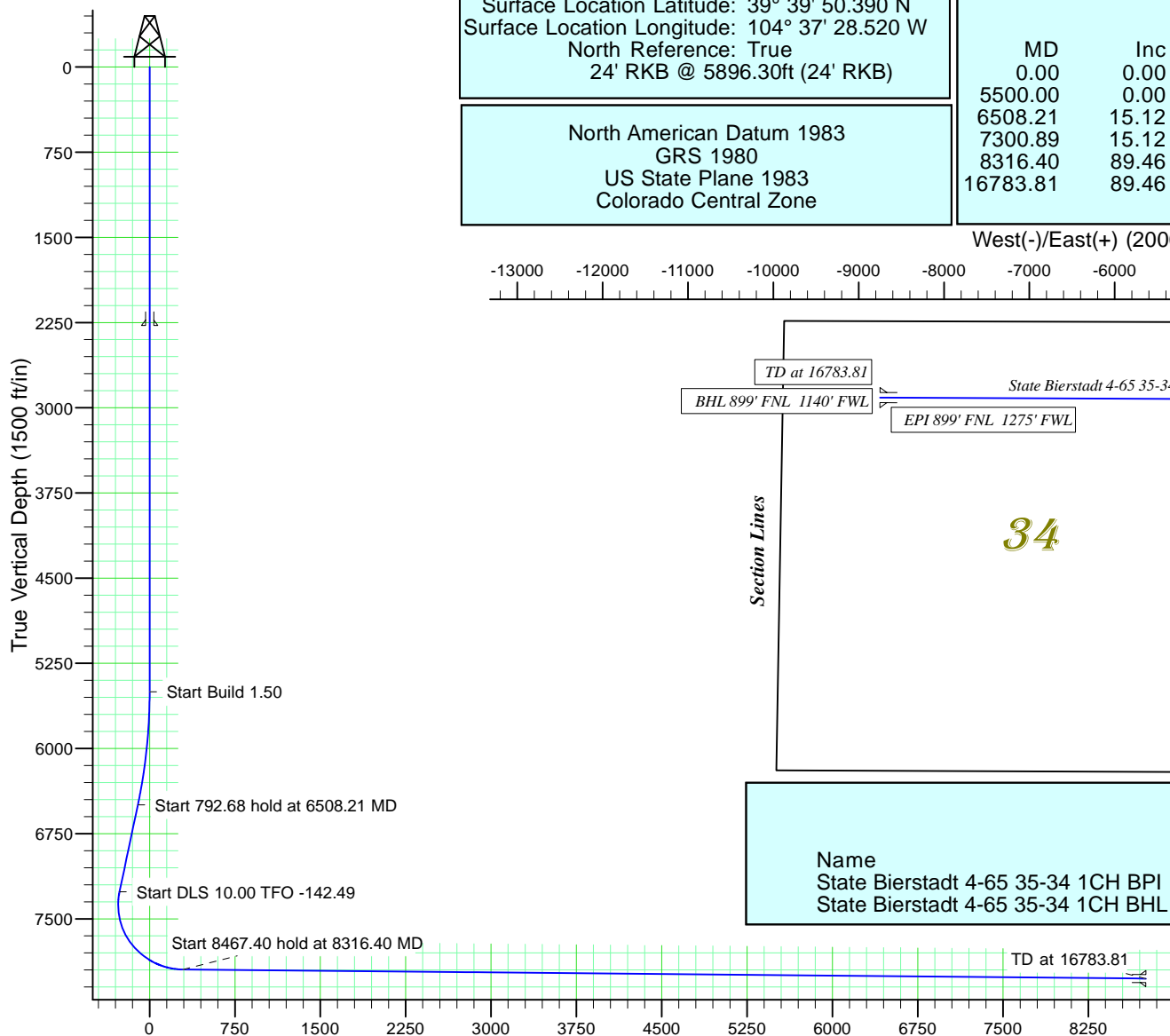
State Bierstadt 4-65 35-34 1CH

Ground Level: 5872.30
Surface Location Latitude: 39° 39' 50.390 N
Surface Location Longitude: 104° 37' 28.520 W
North Reference: True
24' RKB @ 5896.30ft (24' RKB)

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
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00
6508.21	15.12	53.60	6496.54	78.50	106.48	1.50	-103.29
7300.89	15.12	53.60	7261.77	201.21	272.94	0.00	-264.76
8316.40	89.46	270.23	7946.00	312.68	-281.53	10.00	293.68
16783.81	89.46	270.23	8026.00	346.55	-8748.49	0.00	8755.35



Wellbore Targets

Name	TVD	Latitude	Longitude
State Bierstadt 4-65 35-34 1CH BPI	7946.00	39° 39' 53.480 N	104° 37' 32.120 W
State Bierstadt 4-65 35-34 1CH BHL	8026.00	39° 39' 53.800 N	104° 39' 20.390 W

Casing Depths

TVD	MD	Name	Size
2276.00	2276.00	9 5/8"	9-5/8
8026.00	16783.815	1 1/2" x 8 3/4"	5-1/2