

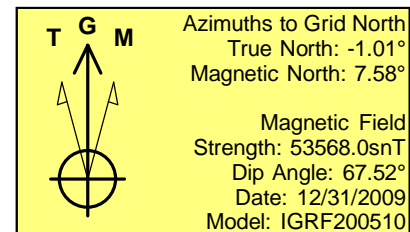
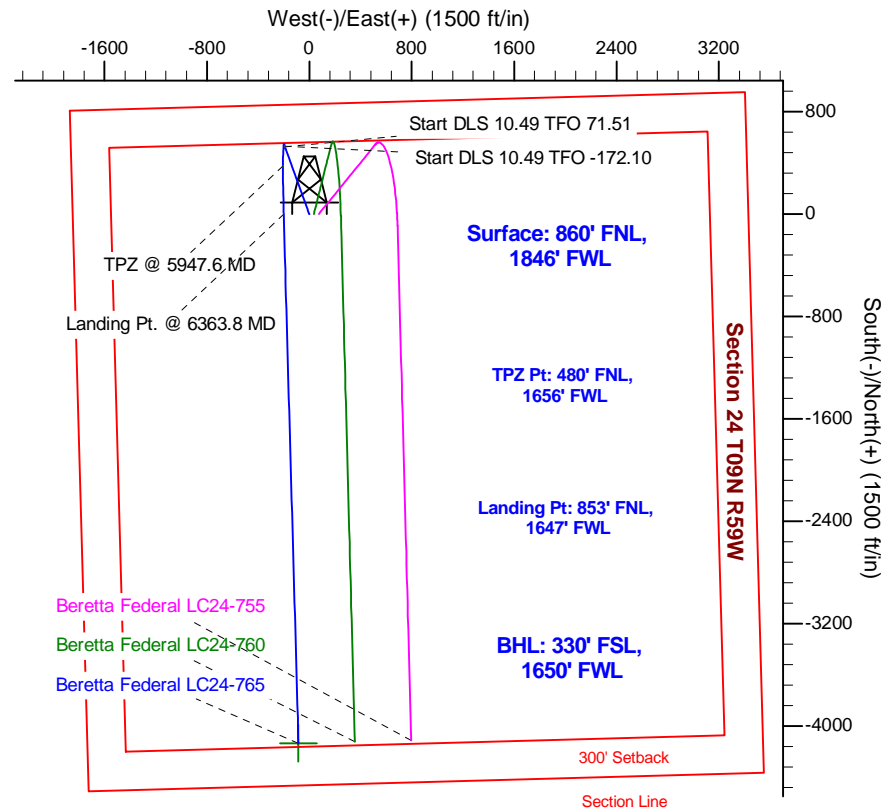
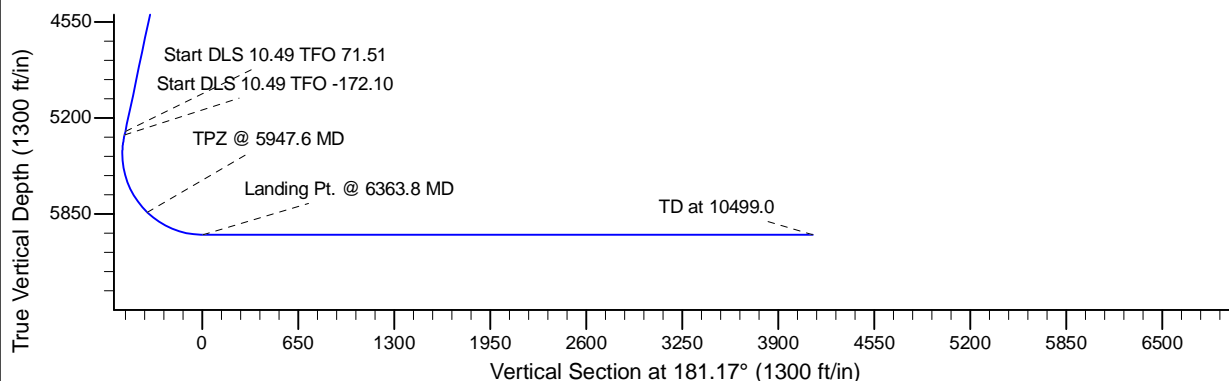
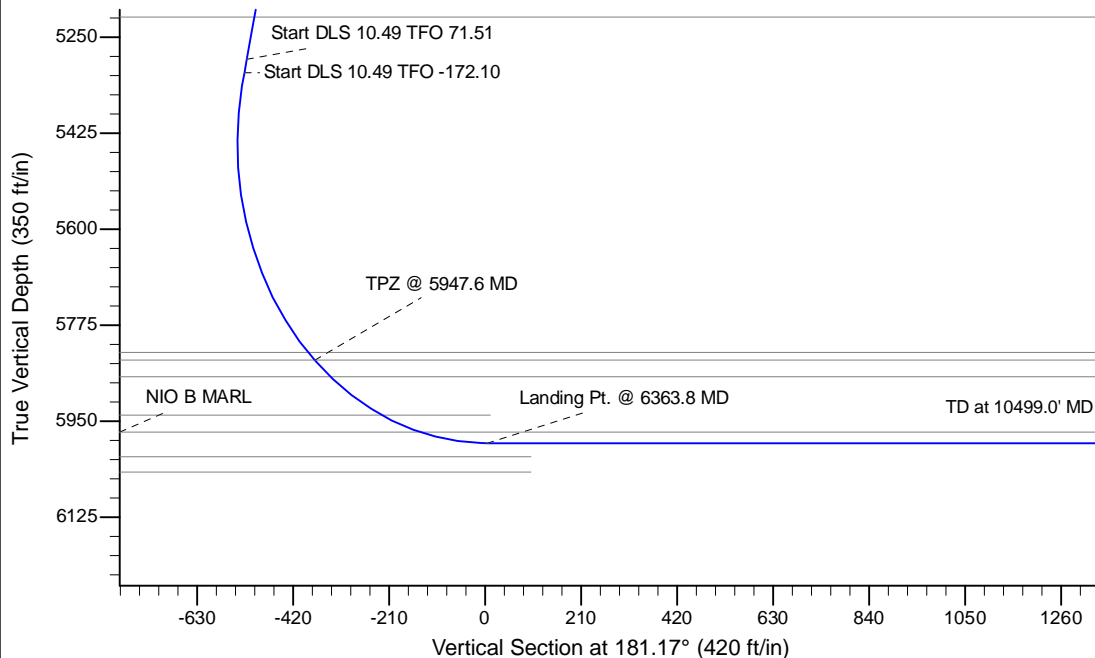
Project: Wattenberg Field
Site: LC (Sec.24-T09N-R59W) Weld County, CO
Well: Beretta Federal LC24-765
Wellbore: Original Drilling
Design: APD - Rev 1

Northern Region Drilling - Working

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	
3	3137.5	12.75	340.00	3132.3	66.4	-24.2	2.00	340.00	-65.9	
4	5349.8	12.75	340.00	5290.0	525.2	-191.2	0.00	0.00	-521.2	
5	5375.4	13.84	350.72	5314.9	530.9	-192.6	10.49	71.51	-526.8	
6	6363.8	90.00	178.40	5990.0	0.0	-200.0	10.49	-172.10	4.1	
7	10499.0	90.00	178.41	5990.0	-4133.7	-84.8	0.00	90.00	4134.6	Beretta Federal LC24-765 BHL 330'FSL, 1650'FWL



WELL DETAILS: Beretta Federal LC24-765

		Ground Level: 4858.0			
		Northing	Easting	Latitude	Longitude
0.0	0.0	1516744.98	3435281.09	40.741270	-103.929120

Plan: APD - Rev 1 (Beretta Federal LC24-765/Original Drilling)

Created By: Shailey Jewell Date: 14:34, July 05 2016

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region Drilling - Working

Wattenberg Field

LC (09N-59W)

Beretta Federal LC24-765

Original Drilling

Plan: APD - Rev 1

Standard Planning Report

05 July, 2016

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Beretta Federal LC24-765
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	LC (09N-59W)	North Reference:	Grid
Well:	Beretta Federal LC24-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 1		

Project	Wattenberg Field, Weld County CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	LC (09N-59W)			
Site Position:		Northing:	1,527,709.69 usft	Latitude: 40.771436
From:	Lat/Long	Easting:	3,433,728.00 usft	Longitude: -103.934025
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence: 1.01 °

Well	Beretta Federal LC24-765			
Well Position	+N/-S	-10,964.7 ft	Northing:	1,516,744.99 usft
	+E/-W	1,553.1 ft	Easting:	3,435,281.08 usft
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft
			Ground Level:	4,858.0 ft

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	8.59	67.52	53,568

Design	APD - Rev 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	181.17

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,137.5	12.75	340.00	3,132.3	66.4	-24.2	2.00	2.00	0.00	340.00	
5,349.8	12.75	340.00	5,290.0	525.2	-191.2	0.00	0.00	0.00	0.00	
5,375.4	13.84	350.72	5,314.9	530.9	-192.6	10.49	4.24	41.84	71.51	
6,363.8	90.00	178.40	5,990.0	0.0	-200.0	10.49	7.71	-17.44	-172.10	
10,499.0	90.00	178.41	5,990.0	-4,133.7	-84.8	0.00	0.00	0.00	90.00	Beretta Federal LC24

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Beretta Federal LC24-765
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	LC (09N-59W)	North Reference:	Grid
Well:	Beretta Federal LC24-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
50.0	0.00	0.00	50.0	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
150.0	0.00	0.00	150.0	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
250.0	0.00	0.00	250.0	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
350.0	0.00	0.00	350.0	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
450.0	0.00	0.00	450.0	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
550.0	0.00	0.00	550.0	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
650.0	0.00	0.00	650.0	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
750.0	0.00	0.00	750.0	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
850.0	0.00	0.00	850.0	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
950.0	0.00	0.00	950.0	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
1,050.0	0.00	0.00	1,050.0	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
1,150.0	0.00	0.00	1,150.0	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
1,250.0	0.00	0.00	1,250.0	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
1,350.0	0.00	0.00	1,350.0	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
1,450.0	0.00	0.00	1,450.0	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
1,550.0	0.00	0.00	1,550.0	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
1,650.0	0.00	0.00	1,650.0	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
1,750.0	0.00	0.00	1,750.0	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
1,850.0	0.00	0.00	1,850.0	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
1,950.0	0.00	0.00	1,950.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,050.0	0.00	0.00	2,050.0	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
2,150.0	0.00	0.00	2,150.0	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
2,250.0	0.00	0.00	2,250.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,350.0	0.00	0.00	2,350.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,450.0	0.00	0.00	2,450.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,550.0	1.00	340.00	2,550.0	0.4	-0.1	-0.4	2.00	2.00	0.00
2,600.0	2.00	340.00	2,600.0	1.6	-0.6	-1.6	2.00	2.00	0.00
2,650.0	3.00	340.00	2,649.9	3.7	-1.3	-3.7	2.00	2.00	0.00

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Beretta Federal LC24-765
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	LC (09N-59W)	North Reference:	Grid
Well:	Beretta Federal LC24-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,700.0	4.00	340.00	2,699.8	6.6	-2.4	-6.5	2.00	2.00	0.00
2,750.0	5.00	340.00	2,749.7	10.2	-3.7	-10.2	2.00	2.00	0.00
2,800.0	6.00	340.00	2,799.5	14.7	-5.4	-14.6	2.00	2.00	0.00
2,850.0	7.00	340.00	2,849.1	20.1	-7.3	-19.9	2.00	2.00	0.00
2,900.0	8.00	340.00	2,898.7	26.2	-9.5	-26.0	2.00	2.00	0.00
2,950.0	9.00	340.00	2,948.2	33.1	-12.1	-32.9	2.00	2.00	0.00
3,000.0	10.00	340.00	2,997.5	40.9	-14.9	-40.6	2.00	2.00	0.00
3,050.0	11.00	340.00	3,046.6	49.5	-18.0	-49.1	2.00	2.00	0.00
3,100.0	12.00	340.00	3,095.6	58.8	-21.4	-58.4	2.00	2.00	0.00
3,137.5	12.75	340.00	3,132.3	66.4	-24.2	-65.9	2.00	2.00	0.00
3,150.0	12.75	340.00	3,144.4	69.0	-25.1	-68.4	0.00	0.00	0.00
3,200.0	12.75	340.00	3,193.2	79.3	-28.9	-78.7	0.00	0.00	0.00
3,250.0	12.75	340.00	3,242.0	89.7	-32.7	-89.0	0.00	0.00	0.00
3,300.0	12.75	340.00	3,290.7	100.1	-36.4	-99.3	0.00	0.00	0.00
3,350.0	12.75	340.00	3,339.5	110.4	-40.2	-109.6	0.00	0.00	0.00
3,400.0	12.75	340.00	3,388.3	120.8	-44.0	-119.9	0.00	0.00	0.00
3,450.0	12.75	340.00	3,437.0	131.2	-47.7	-130.2	0.00	0.00	0.00
3,500.0	12.75	340.00	3,485.8	141.6	-51.5	-140.5	0.00	0.00	0.00
3,550.0	12.75	340.00	3,534.6	151.9	-55.3	-150.8	0.00	0.00	0.00
3,600.0	12.75	340.00	3,583.3	162.3	-59.1	-161.1	0.00	0.00	0.00
3,650.0	12.75	340.00	3,632.1	172.7	-62.8	-171.3	0.00	0.00	0.00
3,700.0	12.75	340.00	3,680.9	183.0	-66.6	-181.6	0.00	0.00	0.00
3,750.0	12.75	340.00	3,729.6	193.4	-70.4	-191.9	0.00	0.00	0.00
3,800.0	12.75	340.00	3,778.4	203.8	-74.2	-202.2	0.00	0.00	0.00
3,850.0	12.75	340.00	3,827.2	214.1	-77.9	-212.5	0.00	0.00	0.00
3,900.0	12.75	340.00	3,876.0	224.5	-81.7	-222.8	0.00	0.00	0.00
3,950.0	12.75	340.00	3,924.7	234.9	-85.5	-233.1	0.00	0.00	0.00
4,000.0	12.75	340.00	3,973.5	245.3	-89.3	-243.4	0.00	0.00	0.00
4,050.0	12.75	340.00	4,022.3	255.6	-93.0	-253.7	0.00	0.00	0.00
4,100.0	12.75	340.00	4,071.0	266.0	-96.8	-263.9	0.00	0.00	0.00
4,150.0	12.75	340.00	4,119.8	276.4	-100.6	-274.2	0.00	0.00	0.00
4,200.0	12.75	340.00	4,168.6	286.7	-104.4	-284.5	0.00	0.00	0.00
4,250.0	12.75	340.00	4,217.3	297.1	-108.1	-294.8	0.00	0.00	0.00
4,300.0	12.75	340.00	4,266.1	307.5	-111.9	-305.1	0.00	0.00	0.00
4,350.0	12.75	340.00	4,314.9	317.8	-115.7	-315.4	0.00	0.00	0.00
4,400.0	12.75	340.00	4,363.6	328.2	-119.5	-325.7	0.00	0.00	0.00
4,450.0	12.75	340.00	4,412.4	338.6	-123.2	-336.0	0.00	0.00	0.00
4,500.0	12.75	340.00	4,461.2	348.9	-127.0	-346.3	0.00	0.00	0.00
4,550.0	12.75	340.00	4,509.9	359.3	-130.8	-356.6	0.00	0.00	0.00
4,600.0	12.75	340.00	4,558.7	369.7	-134.6	-366.8	0.00	0.00	0.00
4,650.0	12.75	340.00	4,607.5	380.1	-138.3	-377.1	0.00	0.00	0.00
4,700.0	12.75	340.00	4,656.2	390.4	-142.1	-387.4	0.00	0.00	0.00
4,750.0	12.75	340.00	4,705.0	400.8	-145.9	-397.7	0.00	0.00	0.00
4,800.0	12.75	340.00	4,753.8	411.2	-149.7	-408.0	0.00	0.00	0.00
4,850.0	12.75	340.00	4,802.5	421.5	-153.4	-418.3	0.00	0.00	0.00
4,900.0	12.75	340.00	4,851.3	431.9	-157.2	-428.6	0.00	0.00	0.00
4,950.0	12.75	340.00	4,900.1	442.3	-161.0	-438.9	0.00	0.00	0.00
5,000.0	12.75	340.00	4,948.8	452.6	-164.7	-449.2	0.00	0.00	0.00
5,050.0	12.75	340.00	4,997.6	463.0	-168.5	-459.5	0.00	0.00	0.00
5,100.0	12.75	340.00	5,046.4	473.4	-172.3	-469.7	0.00	0.00	0.00
5,150.0	12.75	340.00	5,095.1	483.7	-176.1	-480.0	0.00	0.00	0.00
5,200.0	12.75	340.00	5,143.9	494.1	-179.8	-490.3	0.00	0.00	0.00
5,250.0	12.75	340.00	5,192.7	504.5	-183.6	-500.6	0.00	0.00	0.00
5,300.0	12.75	340.00	5,241.4	514.9	-187.4	-510.9	0.00	0.00	0.00

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Beretta Federal LC24-765
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	LC (09N-59W)	North Reference:	Grid
Well:	Beretta Federal LC24-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,349.8	12.75	340.00	5,290.0	525.2	-191.2	-521.2	0.00	0.00	0.00
5,350.0	12.75	340.00	5,290.2	525.2	-191.2	-521.2	0.00	0.00	0.00
5,375.4	13.84	350.72	5,314.9	530.9	-192.6	-526.8	10.58	4.27	42.17
5,400.0	11.29	348.91	5,338.9	536.1	-193.5	-532.0	10.49	-10.37	-7.37
5,450.0	6.18	340.71	5,388.3	543.5	-195.4	-539.4	10.49	-10.22	-16.41
5,500.0	1.99	287.11	5,438.2	546.3	-197.1	-542.1	10.49	-8.38	-107.19
5,550.0	4.98	200.59	5,488.1	544.5	-198.7	-540.3	10.49	5.98	-173.05
5,600.0	10.03	189.12	5,537.7	538.2	-200.1	-533.9	10.49	10.11	-22.94
5,650.0	15.22	185.35	5,586.5	527.3	-201.4	-523.1	10.49	10.37	-7.54
5,700.0	20.43	183.47	5,634.1	512.1	-202.6	-507.8	10.49	10.43	-3.76
5,750.0	25.66	182.33	5,680.0	492.5	-203.6	-488.2	10.49	10.46	-2.28
5,800.0	30.89	181.55	5,724.1	468.9	-204.3	-464.6	10.49	10.47	-1.55
5,850.0	36.13	180.98	5,765.7	441.3	-204.9	-437.0	10.49	10.47	-1.14
5,900.0	41.37	180.54	5,804.7	410.0	-205.4	-405.7	10.49	10.48	-0.88
5,950.0	46.61	180.18	5,840.7	375.3	-205.6	-371.0	10.49	10.48	-0.72
6,000.0	51.85	179.88	5,873.3	337.4	-205.6	-333.1	10.49	10.48	-0.60
6,050.0	57.10	179.62	5,902.4	296.7	-205.4	-292.5	10.49	10.48	-0.52
6,100.0	62.34	179.39	5,927.6	253.6	-205.0	-249.3	10.49	10.49	-0.46
6,150.0	67.58	179.18	5,948.7	208.3	-204.5	-204.1	10.49	10.49	-0.42
6,200.0	72.83	178.98	5,965.6	161.3	-203.7	-157.1	10.49	10.49	-0.39
6,250.0	78.07	178.80	5,978.2	112.9	-202.8	-108.7	10.49	10.49	-0.37
6,300.0	83.31	178.62	5,986.3	63.6	-201.7	-59.4	10.49	10.49	-0.35
6,350.0	88.56	178.45	5,989.8	13.7	-200.4	-9.6	10.49	10.49	-0.35
6,363.8	90.00	178.40	5,990.0	0.0	-200.0	4.1	10.49	10.49	-0.35
6,400.0	90.00	178.40	5,990.0	-36.2	-199.0	40.3	0.00	0.00	0.00
6,450.0	90.00	178.40	5,990.0	-86.2	-197.6	90.2	0.00	0.00	0.00
6,500.0	90.00	178.40	5,990.0	-136.2	-196.2	140.2	0.00	0.00	0.00
6,550.0	90.00	178.40	5,990.0	-186.2	-194.8	190.1	0.00	0.00	0.00
6,600.0	90.00	178.40	5,990.0	-236.2	-193.4	240.1	0.00	0.00	0.00
6,650.0	90.00	178.40	5,990.0	-286.1	-192.0	290.0	0.00	0.00	0.00
6,700.0	90.00	178.40	5,990.0	-336.1	-190.6	340.0	0.00	0.00	0.00
6,750.0	90.00	178.40	5,990.0	-386.1	-189.2	389.9	0.00	0.00	0.00
6,800.0	90.00	178.40	5,990.0	-436.1	-187.8	439.8	0.00	0.00	0.00
6,850.0	90.00	178.40	5,990.0	-486.1	-186.4	489.8	0.00	0.00	0.00
6,900.0	90.00	178.40	5,990.0	-536.0	-185.0	539.7	0.00	0.00	0.00
6,950.0	90.00	178.40	5,990.0	-586.0	-183.6	589.7	0.00	0.00	0.00
7,000.0	90.00	178.40	5,990.0	-636.0	-182.2	639.6	0.00	0.00	0.00
7,050.0	90.00	178.40	5,990.0	-686.0	-180.8	689.5	0.00	0.00	0.00
7,100.0	90.00	178.40	5,990.0	-736.0	-179.5	739.5	0.00	0.00	0.00
7,150.0	90.00	178.40	5,990.0	-785.9	-178.1	789.4	0.00	0.00	0.00
7,200.0	90.00	178.40	5,990.0	-835.9	-176.7	839.4	0.00	0.00	0.00
7,250.0	90.00	178.40	5,990.0	-885.9	-175.3	889.3	0.00	0.00	0.00
7,300.0	90.00	178.40	5,990.0	-935.9	-173.9	939.3	0.00	0.00	0.00
7,350.0	90.00	178.40	5,990.0	-985.9	-172.5	989.2	0.00	0.00	0.00
7,400.0	90.00	178.40	5,990.0	-1,035.8	-171.1	1,039.1	0.00	0.00	0.00
7,450.0	90.00	178.40	5,990.0	-1,085.8	-169.7	1,089.1	0.00	0.00	0.00
7,500.0	90.00	178.40	5,990.0	-1,135.8	-168.3	1,139.0	0.00	0.00	0.00
7,550.0	90.00	178.40	5,990.0	-1,185.8	-166.9	1,189.0	0.00	0.00	0.00
7,600.0	90.00	178.40	5,990.0	-1,235.8	-165.5	1,238.9	0.00	0.00	0.00
7,650.0	90.00	178.40	5,990.0	-1,285.7	-164.1	1,288.8	0.00	0.00	0.00
7,700.0	90.00	178.40	5,990.0	-1,335.7	-162.7	1,338.8	0.00	0.00	0.00
7,750.0	90.00	178.40	5,990.0	-1,385.7	-161.3	1,388.7	0.00	0.00	0.00
7,800.0	90.00	178.40	5,990.0	-1,435.7	-159.9	1,438.7	0.00	0.00	0.00
7,850.0	90.00	178.40	5,990.0	-1,485.7	-158.5	1,488.6	0.00	0.00	0.00

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Beretta Federal LC24-765
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	LC (09N-59W)	North Reference:	Grid
Well:	Beretta Federal LC24-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,900.0	90.00	178.40	5,990.0	-1,535.7	-157.1	1,538.6	0.00	0.00	0.00
7,950.0	90.00	178.40	5,990.0	-1,585.6	-155.7	1,588.5	0.00	0.00	0.00
8,000.0	90.00	178.40	5,990.0	-1,635.6	-154.3	1,638.4	0.00	0.00	0.00
8,050.0	90.00	178.40	5,990.0	-1,685.6	-153.0	1,688.4	0.00	0.00	0.00
8,100.0	90.00	178.40	5,990.0	-1,735.6	-151.6	1,738.3	0.00	0.00	0.00
8,150.0	90.00	178.40	5,990.0	-1,785.6	-150.2	1,788.3	0.00	0.00	0.00
8,200.0	90.00	178.40	5,990.0	-1,835.5	-148.8	1,838.2	0.00	0.00	0.00
8,250.0	90.00	178.40	5,990.0	-1,885.5	-147.4	1,888.1	0.00	0.00	0.00
8,300.0	90.00	178.40	5,990.0	-1,935.5	-146.0	1,938.1	0.00	0.00	0.00
8,350.0	90.00	178.40	5,990.0	-1,985.5	-144.6	1,988.0	0.00	0.00	0.00
8,400.0	90.00	178.40	5,990.0	-2,035.5	-143.2	2,038.0	0.00	0.00	0.00
8,450.0	90.00	178.40	5,990.0	-2,085.4	-141.8	2,087.9	0.00	0.00	0.00
8,500.0	90.00	178.40	5,990.0	-2,135.4	-140.4	2,137.8	0.00	0.00	0.00
8,550.0	90.00	178.40	5,990.0	-2,185.4	-139.0	2,187.8	0.00	0.00	0.00
8,600.0	90.00	178.40	5,990.0	-2,235.4	-137.6	2,237.7	0.00	0.00	0.00
8,650.0	90.00	178.40	5,990.0	-2,285.4	-136.2	2,287.7	0.00	0.00	0.00
8,700.0	90.00	178.40	5,990.0	-2,335.3	-134.8	2,337.6	0.00	0.00	0.00
8,750.0	90.00	178.40	5,990.0	-2,385.3	-133.4	2,387.6	0.00	0.00	0.00
8,800.0	90.00	178.40	5,990.0	-2,435.3	-132.1	2,437.5	0.00	0.00	0.00
8,850.0	90.00	178.40	5,990.0	-2,485.3	-130.7	2,487.4	0.00	0.00	0.00
8,900.0	90.00	178.40	5,990.0	-2,535.3	-129.3	2,537.4	0.00	0.00	0.00
8,950.0	90.00	178.40	5,990.0	-2,585.2	-127.9	2,587.3	0.00	0.00	0.00
9,000.0	90.00	178.40	5,990.0	-2,635.2	-126.5	2,637.3	0.00	0.00	0.00
9,050.0	90.00	178.40	5,990.0	-2,685.2	-125.1	2,687.2	0.00	0.00	0.00
9,100.0	90.00	178.40	5,990.0	-2,735.2	-123.7	2,737.1	0.00	0.00	0.00
9,150.0	90.00	178.40	5,990.0	-2,785.2	-122.3	2,787.1	0.00	0.00	0.00
9,200.0	90.00	178.40	5,990.0	-2,835.1	-120.9	2,837.0	0.00	0.00	0.00
9,250.0	90.00	178.40	5,990.0	-2,885.1	-119.5	2,887.0	0.00	0.00	0.00
9,300.0	90.00	178.40	5,990.0	-2,935.1	-118.1	2,936.9	0.00	0.00	0.00
9,350.0	90.00	178.40	5,990.0	-2,985.1	-116.7	2,986.9	0.00	0.00	0.00
9,400.0	90.00	178.40	5,990.0	-3,035.1	-115.3	3,036.8	0.00	0.00	0.00
9,450.0	90.00	178.40	5,990.0	-3,085.0	-114.0	3,086.7	0.00	0.00	0.00
9,500.0	90.00	178.40	5,990.0	-3,135.0	-112.6	3,136.7	0.00	0.00	0.00
9,550.0	90.00	178.40	5,990.0	-3,185.0	-111.2	3,186.6	0.00	0.00	0.00
9,600.0	90.00	178.41	5,990.0	-3,235.0	-109.8	3,236.6	0.00	0.00	0.00
9,650.0	90.00	178.41	5,990.0	-3,285.0	-108.4	3,286.5	0.00	0.00	0.00
9,700.0	90.00	178.41	5,990.0	-3,335.0	-107.0	3,336.4	0.00	0.00	0.00
9,750.0	90.00	178.41	5,990.0	-3,384.9	-105.6	3,386.4	0.00	0.00	0.00
9,800.0	90.00	178.41	5,990.0	-3,434.9	-104.2	3,436.3	0.00	0.00	0.00
9,850.0	90.00	178.41	5,990.0	-3,484.9	-102.8	3,486.3	0.00	0.00	0.00
9,900.0	90.00	178.41	5,990.0	-3,534.9	-101.4	3,536.2	0.00	0.00	0.00
9,950.0	90.00	178.41	5,990.0	-3,584.9	-100.0	3,586.2	0.00	0.00	0.00
10,000.0	90.00	178.41	5,990.0	-3,634.8	-98.6	3,636.1	0.00	0.00	0.00
10,050.0	90.00	178.41	5,990.0	-3,684.8	-97.3	3,686.0	0.00	0.00	0.00
10,100.0	90.00	178.41	5,990.0	-3,734.8	-95.9	3,736.0	0.00	0.00	0.00
10,150.0	90.00	178.41	5,990.0	-3,784.8	-94.5	3,785.9	0.00	0.00	0.00
10,200.0	90.00	178.41	5,990.0	-3,834.8	-93.1	3,835.9	0.00	0.00	0.00
10,250.0	90.00	178.41	5,990.0	-3,884.7	-91.7	3,885.8	0.00	0.00	0.00
10,300.0	90.00	178.41	5,990.0	-3,934.7	-90.3	3,935.7	0.00	0.00	0.00
10,350.0	90.00	178.41	5,990.0	-3,984.7	-88.9	3,985.7	0.00	0.00	0.00
10,400.0	90.00	178.41	5,990.0	-4,034.7	-87.5	4,035.6	0.00	0.00	0.00
10,450.0	90.00	178.41	5,990.0	-4,084.7	-86.1	4,085.6	0.00	0.00	0.00
10,499.0	90.00	178.41	5,990.0	-4,133.7	-84.8	4,134.6	0.00	0.00	0.00

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Beretta Federal LC24-765
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site:	LC (09N-59W)	North Reference:	Grid
Well:	Beretta Federal LC24-765	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
Beretta Federal LC24-765	0.00	0.00	5,990.0	-4,133.7	-84.8	1,512,611.34	3,435,196.31	40.729930	-103.929690
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
932.0	932.0	UPPER PIERRE AQUIFER BASE		0.00		
1,492.0	1,492.0	UPPER PIERRE AQUIFER TOP		0.00		
3,404.8	3,393.0	PARKMAN		0.00		
3,938.0	3,913.0	SUSSEX		0.00		
4,553.2	4,513.0	SHANNON		0.00		
5,270.9	5,213.0	TEEPEE BUTTES		0.00		
5,927.7	5,825.0	SHARON SPRINGS		0.00		
5,947.6	5,839.0	NIO A CHALK		0.00		
5,993.1	5,869.0	NIO A MARL		0.00		
6,125.8	5,939.0	NIO B CHALK		0.00		
6,215.5	5,970.0	NIO B MARL		0.00		

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
2,500.0	2,500.0	0.0	0.0	KOP - Start Build 2.00	
5,349.8	5,290.0	525.2	-191.2	Start DLS 10.49 TFO 71.51	
5,375.4	5,314.9	530.9	-192.6	Start DLS 10.49 TFO -172.10	
5,947.6	5,839.0	377.0	-205.6	TPZ @ 5947.6 MD	
6,363.8	5,990.0	0.0	-200.0	Landing Pt. @ 6363.8 MD	
10,499.0	5,990.0	-4,133.6	-84.8	TD at 10499.0	

Northern Region Drilling - Working

Wattenberg Field

LC (09N-59W)

Beretta Federal LC24-765

Original Drilling

APD - Rev 1

Anticollision Summary Report

05 July, 2016

Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well Beretta Federal LC24-765
Project:	Wattenberg Field	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Reference Site:	LC (09N-59W)	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Beretta Federal LC24-765	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM01P
Reference Design:	APD - Rev 1	Offset TVD Reference:	Offset Datum

Reference	APD - Rev 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 50.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	7/5/2016		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	10,499.0	APD - Rev 1 (Original Drilling)	MWD	MWD - Standard

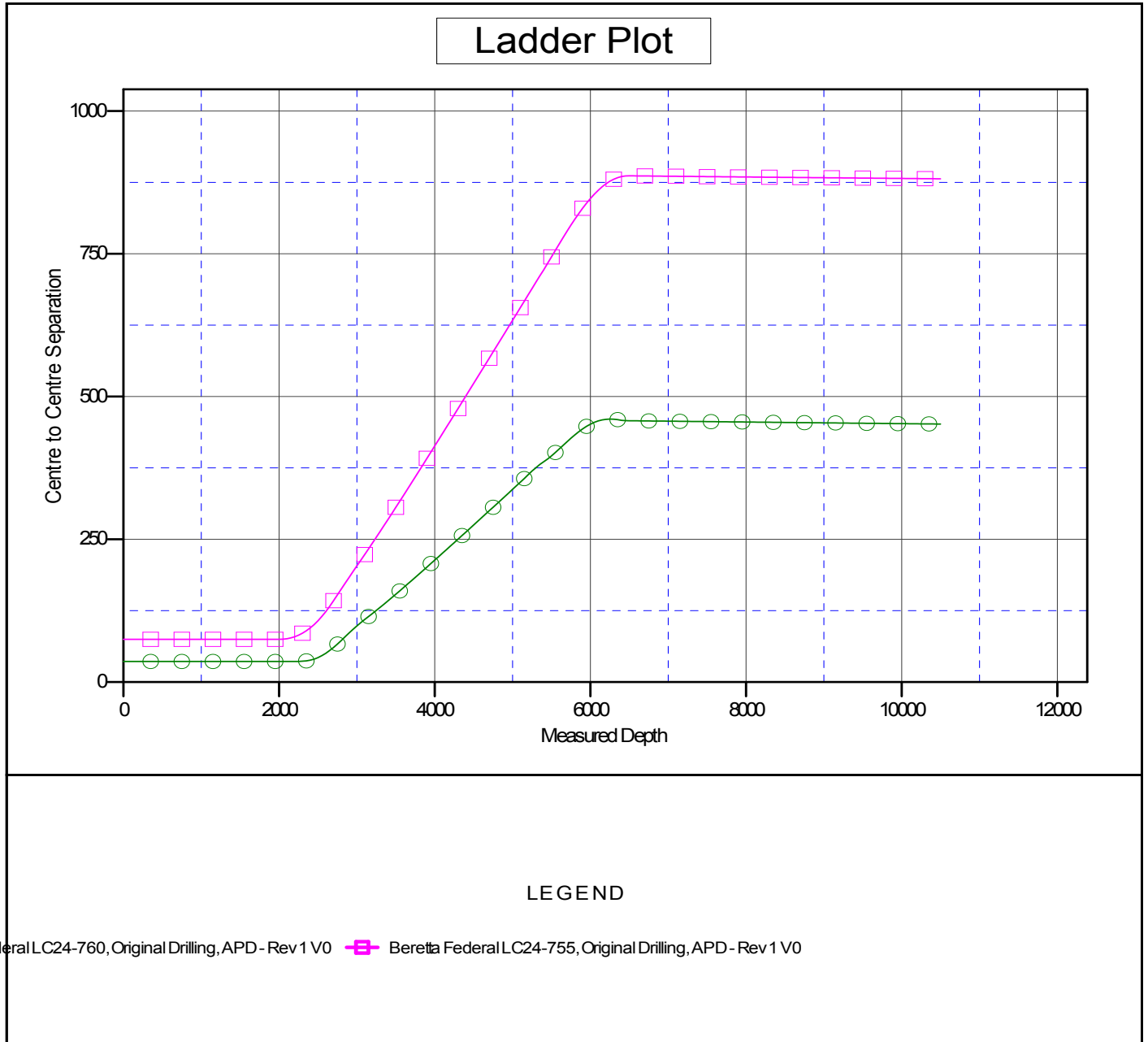
Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
LC (09N-59W)						
Beretta Federal LC24-755 - Original Drilling - APD - Rev	1,983.0	1,984.0	74.8	66.2	8.676	CC
Beretta Federal LC24-755 - Original Drilling - APD - Rev	2,000.0	2,001.0	74.8	66.1	8.599	ES
Beretta Federal LC24-755 - Original Drilling - APD - Rev	10,499.0	10,473.7	881.4	716.5	5.344	SF
Beretta Federal LC24-760 - Original Drilling - APD - Rev	2,200.0	2,200.0	36.0	26.4	3.754	CC
Beretta Federal LC24-760 - Original Drilling - APD - Rev	2,250.0	2,249.8	36.1	26.3	3.680	ES
Beretta Federal LC24-760 - Original Drilling - APD - Rev	10,499.0	10,359.4	451.9	293.5	2.853	SF

Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well Beretta Federal LC24-765
Project:	Wattenberg Field	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Reference Site:	LC (09N-59W)	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Beretta Federal LC24-765	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM01P
Reference Design:	APD - Rev 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4888.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: Beretta Federal LC24-765
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 1.01°



Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well Beretta Federal LC24-765
Project:	Wattenberg Field	TVD Reference:	WELL @ 4888.0ft (Original Well Elev)
Reference Site:	LC (09N-59W)	MD Reference:	WELL @ 4888.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Beretta Federal LC24-765	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM01P
Reference Design:	APD - Rev 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4888.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: Beretta Federal LC24-765
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 1.01°

