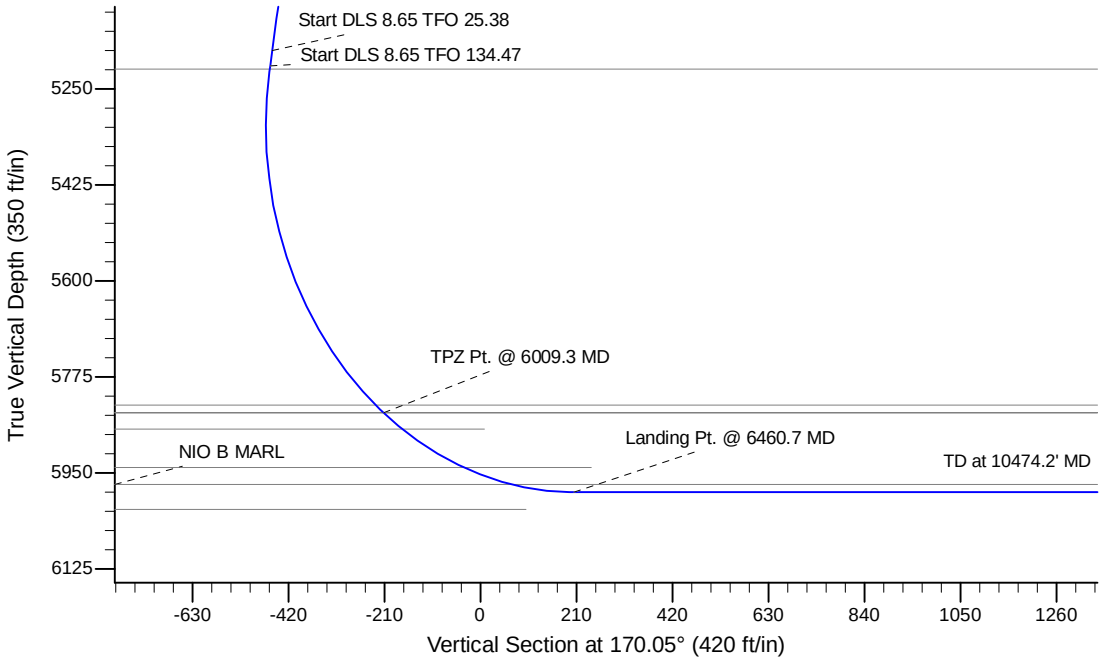
Project: Wattenberg Field
Site: LC (Sec.24-T09N-R59W) Weld County, CO
Well: Beretta Federal LC24-755
Wellbore: Original Drilling
Design: APD - Rev 1

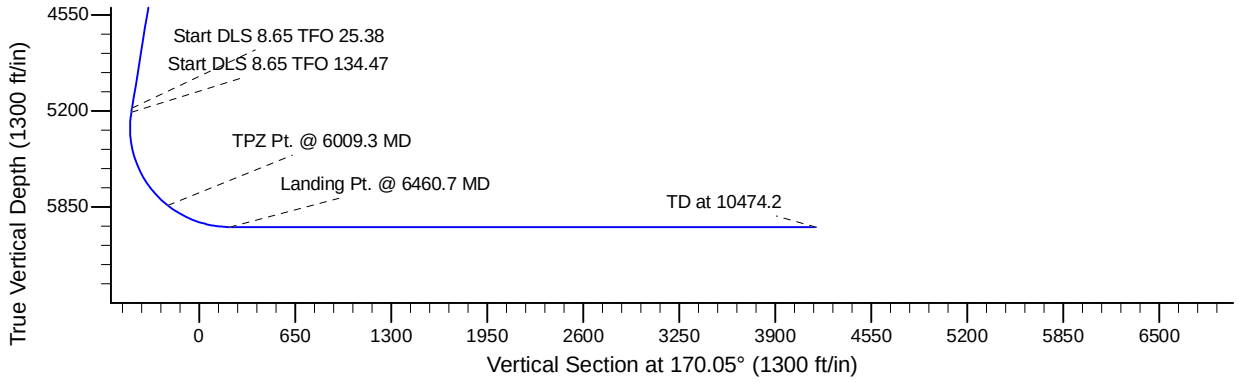
Northern Region Drilling - Working

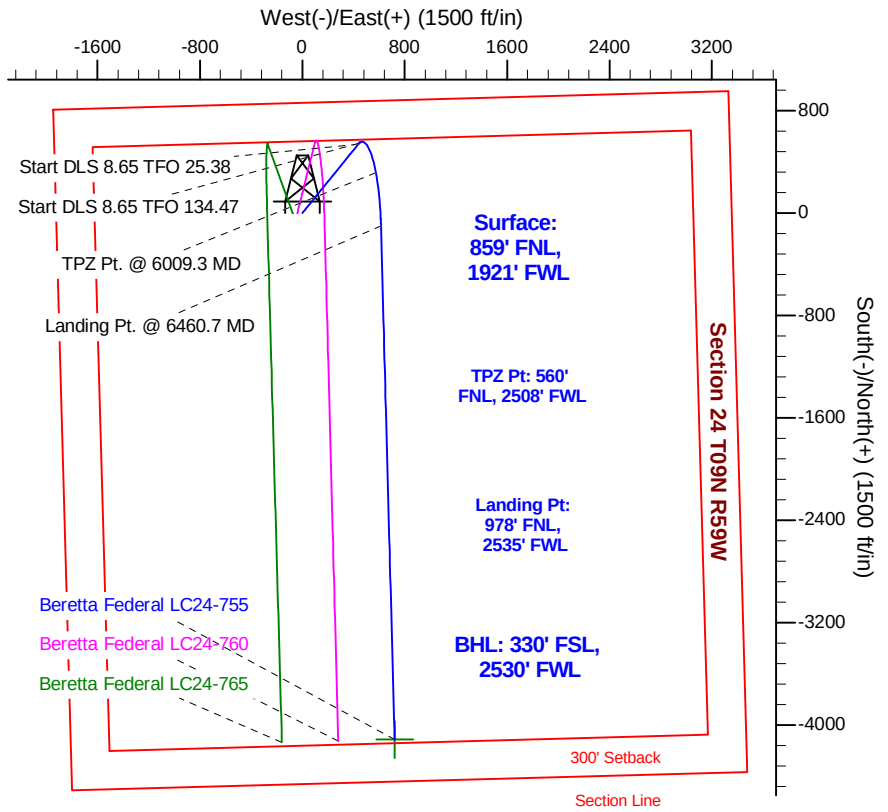
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

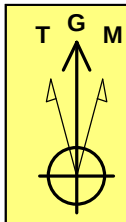
SECTION DETAILS

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	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2687.5	13.75	39.00	2680.9	63.8	51.7	2.00	39.00	-53.9	
4	5260.3	13.75	39.00	5180.0	539.0	436.5	0.00	0.00	-455.5	
5	5289.2	16.04	42.88	5207.9	544.6	441.4	8.65	25.38	-460.2	
6	6460.7	90.00	178.48	5985.1	-100.0	614.9	8.65	134.47	204.8	
7	10474.2	90.00	178.48	5985.0	-4112.1	721.5	0.00	-56.97	4174.9	Beretta Federal LC24-755 BHL 330'FSL, 2530'FWL









Azimuths to Grid North
True North: -1.01°
Magnetic North: 7.58°

Magnetic Field
Strength: 53568.0snT
Dip Angle: 67.52°
Date: 12/31/2009
Model: IGRF200510

WELL DETAILS: Beretta Federal LC24-755

Ground Level: 4859.0

		Northing	Easting	Latitude	Longitude
0.0	0.0	1516746.30	3435355.89	40.741270	-103.928850

Plan: APD - Rev 1 (Beretta Federal LC24-755/Original Drilling)

Created By: Shailey Jewell Date: 15:04, July 05 2016

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region Drilling - Working

Wattenberg Field
LC (09N-59W)
Beretta Federal LC24-755

Original Drilling

Plan: APD - Rev 1

Standard Planning Report

05 July, 2016

Database:	EDM01P	**Local Co-ordinate Reference:**	Well Beretta Federal LC24-755
Company:	Northern Region Drilling - Working	**TVD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Project:	Wattenberg Field	**MD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Site:	LC (09N-59W)	**North Reference:**	Grid
Well:	Beretta Federal LC24-755	**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 LC24-755					
Well Position	**+N/-S**	-10,963.4 ft	**Northing:**	1,516,746.31 usft	**Latitude:**	40.741270
	+E/-W	1,627.9 ft	**Easting:**	3,435,355.89 usft	**Longitude:**	-103.928850
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	4,859.0 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) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**
	0.0	0.0	0.0	170.05

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,687.5	13.75	39.00	2,680.9	63.8	51.7	2.00	2.00	0.00	39.00	
5,260.3	13.75	39.00	5,180.0	539.0	436.5	0.00	0.00	0.00	0.00	
5,289.2	16.04	42.88	5,207.9	544.6	441.4	8.65	7.94	13.43	25.38	
6,460.7	90.00	178.48	5,985.1	-100.0	614.9	8.65	6.31	11.57	134.47	
10,474.2	90.00	178.48	5,985.0	-4,112.1	721.5	0.00	0.00	0.00	-56.97	Beretta Federal LC24

Database:	EDM01P	**Local Co-ordinate Reference:**	Well Beretta Federal LC24-755
Company:	Northern Region Drilling - Working	**TVD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Project:	Wattenberg Field	**MD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Site:	LC (09N-59W)	**North Reference:**	Grid
Well:	Beretta Federal LC24-755	**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	1.00	39.00	2,050.0	0.3	0.3	-0.3	2.00	2.00	0.00
2,100.0	2.00	39.00	2,100.0	1.4	1.1	-1.1	2.00	2.00	0.00
2,150.0	3.00	39.00	2,149.9	3.1	2.5	-2.6	2.00	2.00	0.00
2,200.0	4.00	39.00	2,199.8	5.4	4.4	-4.6	2.00	2.00	0.00
2,250.0	5.00	39.00	2,249.7	8.5	6.9	-7.2	2.00	2.00	0.00
2,300.0	6.00	39.00	2,299.5	12.2	9.9	-10.3	2.00	2.00	0.00
2,350.0	7.00	39.00	2,349.1	16.6	13.4	-14.0	2.00	2.00	0.00
2,400.0	8.00	39.00	2,398.7	21.7	17.5	-18.3	2.00	2.00	0.00
2,450.0	9.00	39.00	2,448.2	27.4	22.2	-23.2	2.00	2.00	0.00
2,500.0	10.00	39.00	2,497.5	33.8	27.4	-28.6	2.00	2.00	0.00
2,550.0	11.00	39.00	2,546.6	40.9	33.1	-34.6	2.00	2.00	0.00
2,600.0	12.00	39.00	2,595.6	48.7	39.4	-41.1	2.00	2.00	0.00
2,650.0	13.00	39.00	2,644.4	57.1	46.2	-48.2	2.00	2.00	0.00

Database:	EDM01P	**Local Co-ordinate Reference:**	Well Beretta Federal LC24-755
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Project:	Wattenberg Field	**MD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Site:	LC (09N-59W)	**North Reference:**	Grid
Well:	Beretta Federal LC24-755	**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)
2,687.5	13.75	39.00	2,680.9	63.8	51.7	-53.9	2.00	2.00	0.00
2,700.0	13.75	39.00	2,693.1	66.1	53.5	-55.9	0.00	0.00	0.00
2,750.0	13.75	39.00	2,741.6	75.3	61.0	-63.7	0.00	0.00	0.00
2,800.0	13.75	39.00	2,790.2	84.6	68.5	-71.5	0.00	0.00	0.00
2,850.0	13.75	39.00	2,838.8	93.8	76.0	-79.3	0.00	0.00	0.00
2,900.0	13.75	39.00	2,887.3	103.1	83.5	-87.1	0.00	0.00	0.00
2,950.0	13.75	39.00	2,935.9	112.3	90.9	-94.9	0.00	0.00	0.00
3,000.0	13.75	39.00	2,984.5	121.5	98.4	-102.7	0.00	0.00	0.00
3,050.0	13.75	39.00	3,033.0	130.8	105.9	-110.5	0.00	0.00	0.00
3,100.0	13.75	39.00	3,081.6	140.0	113.4	-118.3	0.00	0.00	0.00
3,150.0	13.75	39.00	3,130.2	149.2	120.8	-126.1	0.00	0.00	0.00
3,200.0	13.75	39.00	3,178.7	158.5	128.3	-133.9	0.00	0.00	0.00
3,250.0	13.75	39.00	3,227.3	167.7	135.8	-141.7	0.00	0.00	0.00
3,300.0	13.75	39.00	3,275.9	176.9	143.3	-149.5	0.00	0.00	0.00
3,350.0	13.75	39.00	3,324.4	186.2	150.8	-157.3	0.00	0.00	0.00
3,400.0	13.75	39.00	3,373.0	195.4	158.2	-165.1	0.00	0.00	0.00
3,450.0	13.75	39.00	3,421.6	204.6	165.7	-172.9	0.00	0.00	0.00
3,500.0	13.75	39.00	3,470.1	213.9	173.2	-180.7	0.00	0.00	0.00
3,550.0	13.75	39.00	3,518.7	223.1	180.7	-188.5	0.00	0.00	0.00
3,600.0	13.75	39.00	3,567.3	232.4	188.2	-196.3	0.00	0.00	0.00
3,650.0	13.75	39.00	3,615.8	241.6	195.6	-204.1	0.00	0.00	0.00
3,700.0	13.75	39.00	3,664.4	250.8	203.1	-212.0	0.00	0.00	0.00
3,750.0	13.75	39.00	3,713.0	260.1	210.6	-219.8	0.00	0.00	0.00
3,800.0	13.75	39.00	3,761.5	269.3	218.1	-227.6	0.00	0.00	0.00
3,850.0	13.75	39.00	3,810.1	278.5	225.6	-235.4	0.00	0.00	0.00
3,900.0	13.75	39.00	3,858.7	287.8	233.0	-243.2	0.00	0.00	0.00
3,950.0	13.75	39.00	3,907.2	297.0	240.5	-251.0	0.00	0.00	0.00
4,000.0	13.75	39.00	3,955.8	306.2	248.0	-258.8	0.00	0.00	0.00
4,050.0	13.75	39.00	4,004.4	315.5	255.5	-266.6	0.00	0.00	0.00
4,100.0	13.75	39.00	4,052.9	324.7	262.9	-274.4	0.00	0.00	0.00
4,150.0	13.75	39.00	4,101.5	334.0	270.4	-282.2	0.00	0.00	0.00
4,200.0	13.75	39.00	4,150.1	343.2	277.9	-290.0	0.00	0.00	0.00
4,250.0	13.75	39.00	4,198.6	352.4	285.4	-297.8	0.00	0.00	0.00
4,300.0	13.75	39.00	4,247.2	361.7	292.9	-305.6	0.00	0.00	0.00
4,350.0	13.75	39.00	4,295.8	370.9	300.3	-313.4	0.00	0.00	0.00
4,400.0	13.75	39.00	4,344.3	380.1	307.8	-321.2	0.00	0.00	0.00
4,450.0	13.75	39.00	4,392.9	389.4	315.3	-329.0	0.00	0.00	0.00
4,500.0	13.75	39.00	4,441.5	398.6	322.8	-336.8	0.00	0.00	0.00
4,550.0	13.75	39.00	4,490.0	407.8	330.3	-344.6	0.00	0.00	0.00
4,600.0	13.75	39.00	4,538.6	417.1	337.7	-352.4	0.00	0.00	0.00
4,650.0	13.75	39.00	4,587.2	426.3	345.2	-360.2	0.00	0.00	0.00
4,700.0	13.75	39.00	4,635.7	435.5	352.7	-368.0	0.00	0.00	0.00
4,750.0	13.75	39.00	4,684.3	444.8	360.2	-375.8	0.00	0.00	0.00
4,800.0	13.75	39.00	4,732.9	454.0	367.7	-383.6	0.00	0.00	0.00
4,850.0	13.75	39.00	4,781.4	463.3	375.1	-391.5	0.00	0.00	0.00
4,900.0	13.75	39.00	4,830.0	472.5	382.6	-399.3	0.00	0.00	0.00
4,950.0	13.75	39.00	4,878.6	481.7	390.1	-407.1	0.00	0.00	0.00
5,000.0	13.75	39.00	4,927.1	491.0	397.6	-414.9	0.00	0.00	0.00
5,050.0	13.75	39.00	4,975.7	500.2	405.1	-422.7	0.00	0.00	0.00
5,100.0	13.75	39.00	5,024.3	509.4	412.5	-430.5	0.00	0.00	0.00
5,150.0	13.75	39.00	5,072.8	518.7	420.0	-438.3	0.00	0.00	0.00
5,200.0	13.75	39.00	5,121.4	527.9	427.5	-446.1	0.00	0.00	0.00
5,250.0	13.75	39.00	5,170.0	537.1	435.0	-453.9	0.00	0.00	0.00
5,260.3	13.75	39.00	5,180.0	539.0	436.5	-455.5	0.00	0.00	0.00

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Project:	Wattenberg Field	**MD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Site:	LC (09N-59W)	**North Reference:**	Grid
Well:	Beretta Federal LC24-755	**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)
5,289.2	16.04	42.88	5,207.9	544.6	441.4	-460.2	8.65	7.94	13.43
5,300.0	15.40	45.39	5,218.3	546.7	443.4	-461.9	8.65	-5.93	23.26
5,350.0	12.90	59.93	5,266.8	554.2	453.0	-467.6	8.65	-5.00	29.07
5,400.0	11.51	79.44	5,315.7	557.9	462.7	-469.6	8.65	-2.77	39.02
5,450.0	11.65	101.10	5,364.7	557.9	472.6	-467.8	8.65	0.27	43.33
5,500.0	13.26	119.85	5,413.5	554.0	482.5	-462.3	8.65	3.22	37.49
5,550.0	15.90	133.55	5,461.9	546.5	492.5	-453.1	8.65	5.28	27.40
5,600.0	19.15	143.08	5,509.6	535.2	502.4	-440.3	8.65	6.50	19.06
5,650.0	22.75	149.82	5,556.3	520.2	512.1	-423.9	8.65	7.20	13.47
5,700.0	26.56	154.75	5,601.8	501.8	521.8	-404.0	8.65	7.62	9.87
5,750.0	30.50	158.51	5,645.7	479.8	531.2	-380.8	8.65	7.88	7.52
5,800.0	34.53	161.48	5,687.8	454.6	540.4	-354.4	8.65	8.05	5.93
5,850.0	38.61	163.89	5,728.0	426.2	549.2	-324.8	8.65	8.16	4.82
5,900.0	42.73	165.90	5,765.9	394.7	557.7	-292.4	8.65	8.25	4.03
5,950.0	46.89	167.62	5,801.4	360.4	565.7	-257.2	8.65	8.31	3.44
6,000.0	51.06	169.13	5,834.2	323.5	573.3	-219.5	8.65	8.35	3.00
6,050.0	55.26	170.46	5,864.2	284.1	580.4	-179.5	8.65	8.39	2.67
6,100.0	59.46	171.66	5,891.1	242.5	586.9	-137.4	8.65	8.41	2.41
6,150.0	63.68	172.77	5,914.9	199.0	592.8	-93.5	8.65	8.43	2.21
6,200.0	67.90	173.80	5,935.4	153.7	598.2	-48.0	8.65	8.45	2.05
6,250.0	72.13	174.76	5,952.5	106.9	602.8	-1.1	8.65	8.46	1.93
6,300.0	76.37	175.68	5,966.1	59.0	606.9	46.8	8.65	8.47	1.84
6,350.0	80.61	176.57	5,976.0	10.1	610.2	95.5	8.65	8.48	1.78
6,400.0	84.85	177.44	5,982.4	-39.4	612.7	144.7	8.65	8.48	1.74
6,450.0	89.09	178.30	5,985.0	-89.3	614.6	194.2	8.65	8.48	1.71
6,460.7	90.00	178.48	5,985.1	-100.0	614.9	204.8	8.65	8.48	1.71
6,500.0	90.00	178.48	5,985.1	-139.3	615.9	243.6	0.00	0.00	0.00
6,550.0	90.00	178.48	5,985.1	-189.3	617.3	293.1	0.00	0.00	0.00
6,600.0	90.00	178.48	5,985.1	-239.2	618.6	342.5	0.00	0.00	0.00
6,650.0	90.00	178.48	5,985.1	-289.2	619.9	392.0	0.00	0.00	0.00
6,700.0	90.00	178.48	5,985.1	-339.2	621.2	441.5	0.00	0.00	0.00
6,750.0	90.00	178.48	5,985.1	-389.2	622.6	490.9	0.00	0.00	0.00
6,800.0	90.00	178.48	5,985.1	-439.2	623.9	540.4	0.00	0.00	0.00
6,850.0	90.00	178.48	5,985.1	-489.2	625.2	589.8	0.00	0.00	0.00
6,900.0	90.00	178.48	5,985.1	-539.1	626.6	639.3	0.00	0.00	0.00
6,950.0	90.00	178.48	5,985.1	-589.1	627.9	688.8	0.00	0.00	0.00
7,000.0	90.00	178.48	5,985.1	-639.1	629.2	738.2	0.00	0.00	0.00
7,050.0	90.00	178.48	5,985.1	-689.1	630.5	787.7	0.00	0.00	0.00
7,100.0	90.00	178.48	5,985.1	-739.1	631.9	837.1	0.00	0.00	0.00
7,150.0	90.00	178.48	5,985.1	-789.0	633.2	886.6	0.00	0.00	0.00
7,200.0	90.00	178.48	5,985.1	-839.0	634.5	936.1	0.00	0.00	0.00
7,250.0	90.00	178.48	5,985.1	-889.0	635.8	985.5	0.00	0.00	0.00
7,300.0	90.00	178.48	5,985.1	-939.0	637.2	1,035.0	0.00	0.00	0.00
7,350.0	90.00	178.48	5,985.1	-989.0	638.5	1,084.4	0.00	0.00	0.00
7,400.0	90.00	178.48	5,985.1	-1,039.0	639.8	1,133.9	0.00	0.00	0.00
7,450.0	90.00	178.48	5,985.1	-1,088.9	641.2	1,183.4	0.00	0.00	0.00
7,500.0	90.00	178.48	5,985.1	-1,138.9	642.5	1,232.8	0.00	0.00	0.00
7,550.0	90.00	178.48	5,985.1	-1,188.9	643.8	1,282.3	0.00	0.00	0.00
7,600.0	90.00	178.48	5,985.1	-1,238.9	645.1	1,331.7	0.00	0.00	0.00
7,650.0	90.00	178.48	5,985.1	-1,288.9	646.5	1,381.2	0.00	0.00	0.00
7,700.0	90.00	178.48	5,985.1	-1,338.9	647.8	1,430.7	0.00	0.00	0.00
7,750.0	90.00	178.48	5,985.1	-1,388.8	649.1	1,480.1	0.00	0.00	0.00
7,800.0	90.00	178.48	5,985.1	-1,438.8	650.4	1,529.6	0.00	0.00	0.00
7,850.0	90.00	178.48	5,985.1	-1,488.8	651.8	1,579.0	0.00	0.00	0.00

Database:	EDM01P	**Local Co-ordinate Reference:**	Well Beretta Federal LC24-755
Company:	Northern Region Drilling - Working	**TVD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Project:	Wattenberg Field	**MD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Site:	LC (09N-59W)	**North Reference:**	Grid
Well:	Beretta Federal LC24-755	**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	178.48	5,985.1	-1,538.8	653.1	1,628.5	0.00	0.00	0.00
7,950.0	90.00	178.48	5,985.1	-1,588.8	654.4	1,678.0	0.00	0.00	0.00
8,000.0	90.00	178.48	5,985.1	-1,638.7	655.8	1,727.4	0.00	0.00	0.00
8,050.0	90.00	178.48	5,985.1	-1,688.7	657.1	1,776.9	0.00	0.00	0.00
8,100.0	90.00	178.48	5,985.1	-1,738.7	658.4	1,826.3	0.00	0.00	0.00
8,150.0	90.00	178.48	5,985.1	-1,788.7	659.7	1,875.8	0.00	0.00	0.00
8,200.0	90.00	178.48	5,985.1	-1,838.7	661.1	1,925.3	0.00	0.00	0.00
8,250.0	90.00	178.48	5,985.1	-1,888.7	662.4	1,974.7	0.00	0.00	0.00
8,300.0	90.00	178.48	5,985.1	-1,938.6	663.7	2,024.2	0.00	0.00	0.00
8,350.0	90.00	178.48	5,985.1	-1,988.6	665.0	2,073.6	0.00	0.00	0.00
8,400.0	90.00	178.48	5,985.1	-2,038.6	666.4	2,123.1	0.00	0.00	0.00
8,450.0	90.00	178.48	5,985.1	-2,088.6	667.7	2,172.6	0.00	0.00	0.00
8,500.0	90.00	178.48	5,985.1	-2,138.6	669.0	2,222.0	0.00	0.00	0.00
8,550.0	90.00	178.48	5,985.1	-2,188.6	670.4	2,271.5	0.00	0.00	0.00
8,600.0	90.00	178.48	5,985.1	-2,238.5	671.7	2,320.9	0.00	0.00	0.00
8,650.0	90.00	178.48	5,985.1	-2,288.5	673.0	2,370.4	0.00	0.00	0.00
8,700.0	90.00	178.48	5,985.1	-2,338.5	674.3	2,419.9	0.00	0.00	0.00
8,750.0	90.00	178.48	5,985.1	-2,388.5	675.7	2,469.3	0.00	0.00	0.00
8,800.0	90.00	178.48	5,985.1	-2,438.5	677.0	2,518.8	0.00	0.00	0.00
8,850.0	90.00	178.48	5,985.1	-2,488.4	678.3	2,568.2	0.00	0.00	0.00
8,900.0	90.00	178.48	5,985.1	-2,538.4	679.7	2,617.7	0.00	0.00	0.00
8,950.0	90.00	178.48	5,985.1	-2,588.4	681.0	2,667.2	0.00	0.00	0.00
9,000.0	90.00	178.48	5,985.1	-2,638.4	682.3	2,716.6	0.00	0.00	0.00
9,050.0	90.00	178.48	5,985.1	-2,688.4	683.6	2,766.1	0.00	0.00	0.00
9,100.0	90.00	178.48	5,985.1	-2,738.4	685.0	2,815.5	0.00	0.00	0.00
9,150.0	90.00	178.48	5,985.1	-2,788.3	686.3	2,865.0	0.00	0.00	0.00
9,200.0	90.00	178.48	5,985.1	-2,838.3	687.6	2,914.5	0.00	0.00	0.00
9,250.0	90.00	178.48	5,985.1	-2,888.3	689.0	2,963.9	0.00	0.00	0.00
9,300.0	90.00	178.48	5,985.0	-2,938.3	690.3	3,013.4	0.00	0.00	0.00
9,350.0	90.00	178.48	5,985.0	-2,988.3	691.6	3,062.8	0.00	0.00	0.00
9,400.0	90.00	178.48	5,985.0	-3,038.3	692.9	3,112.3	0.00	0.00	0.00
9,450.0	90.00	178.48	5,985.0	-3,088.2	694.3	3,161.8	0.00	0.00	0.00
9,500.0	90.00	178.48	5,985.0	-3,138.2	695.6	3,211.2	0.00	0.00	0.00
9,550.0	90.00	178.48	5,985.0	-3,188.2	696.9	3,260.7	0.00	0.00	0.00
9,600.0	90.00	178.48	5,985.0	-3,238.2	698.3	3,310.1	0.00	0.00	0.00
9,650.0	90.00	178.48	5,985.0	-3,288.2	699.6	3,359.6	0.00	0.00	0.00
9,700.0	90.00	178.48	5,985.0	-3,338.1	700.9	3,409.1	0.00	0.00	0.00
9,750.0	90.00	178.48	5,985.0	-3,388.1	702.3	3,458.5	0.00	0.00	0.00
9,800.0	90.00	178.48	5,985.0	-3,438.1	703.6	3,508.0	0.00	0.00	0.00
9,850.0	90.00	178.48	5,985.0	-3,488.1	704.9	3,557.4	0.00	0.00	0.00
9,900.0	90.00	178.48	5,985.0	-3,538.1	706.2	3,606.9	0.00	0.00	0.00
9,950.0	90.00	178.48	5,985.0	-3,588.1	707.6	3,656.4	0.00	0.00	0.00
10,000.0	90.00	178.48	5,985.0	-3,638.0	708.9	3,705.8	0.00	0.00	0.00
10,050.0	90.00	178.48	5,985.0	-3,688.0	710.2	3,755.3	0.00	0.00	0.00
10,100.0	90.00	178.48	5,985.0	-3,738.0	711.6	3,804.7	0.00	0.00	0.00
10,150.0	90.00	178.48	5,985.0	-3,788.0	712.9	3,854.2	0.00	0.00	0.00
10,200.0	90.00	178.48	5,985.0	-3,838.0	714.2	3,903.7	0.00	0.00	0.00
10,250.0	90.00	178.48	5,985.0	-3,888.0	715.6	3,953.1	0.00	0.00	0.00
10,300.0	90.00	178.48	5,985.0	-3,937.9	716.9	4,002.6	0.00	0.00	0.00
10,350.0	90.00	178.48	5,985.0	-3,987.9	718.2	4,052.0	0.00	0.00	0.00
10,400.0	90.00	178.48	5,985.0	-4,037.9	719.5	4,101.5	0.00	0.00	0.00
10,450.0	90.00	178.48	5,985.0	-4,087.9	720.9	4,151.0	0.00	0.00	0.00
10,474.2	90.00	178.48	5,985.0	-4,112.1	721.5	4,174.9	0.00	0.00	0.00

Database:	EDM01P	**Local Co-ordinate Reference:**	Well Beretta Federal LC24-755
Company:	Northern Region Drilling - Working	**TVD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Project:	Wattenberg Field	**MD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Site:	LC (09N-59W)	**North Reference:**	Grid
Well:	Beretta Federal LC24-755	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Beretta Federal LC24-75 - plan hits target center - Point	0.00	0.00	5,985.0	-4,112.1	721.5	1,512,634.25	3,436,077.40	40.729950	-103.926510

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
933.0	933.0	UPPER PIERRE AQUIFER BASE		0.00	
1,493.0	1,493.0	UPPER PIERRE AQUIFER TOP		0.00	
3,421.6	3,394.0	PARKMAN		0.00	
3,957.0	3,914.0	SUSSEX		0.00	
4,574.7	4,514.0	SHANNON		0.00	
5,295.5	5,214.0	TEEPEE BUTTES		0.00	
5,987.1	5,826.0	SHARON SPRINGS		0.00	
6,009.3	5,840.0	NIOBRARA		0.00	
6,009.3	5,840.0	NIO A CHALK		0.00	
6,060.4	5,870.0	NIO A MARL		0.00	
6,212.5	5,940.0	NIO B CHALK		0.00	
6,322.5	5,971.0	NIO B MARL		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,000.0	2,000.0	0.0	0.0	KOP - Start Build 2.00
5,260.3	5,180.0	539.0	436.5	Start DLS 8.65 TFO 25.38
5,289.2	5,207.9	544.6	441.4	Start DLS 8.65 TFO 134.47
6,009.3	5,840.0	316.3	574.7	TPZ Pt. @ 6009.3 MD
6,460.7	5,985.1	-100.0	614.9	Landing Pt. @ 6460.7 MD
10,474.2	5,985.0	-4,112.1	721.5	TD at 10474.2

Northern Region Drilling - Working

Wattenberg Field
LC (09N-59W)
Beretta Federal LC24-755

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 LC24-755
Project:	Wattenberg Field	**TVD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Reference Site:	LC (09N-59W)	**MD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Beretta Federal LC24-755	**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	10,474.2	APD - Rev 1 (Original Drilling)	MWD	MWD - Standard

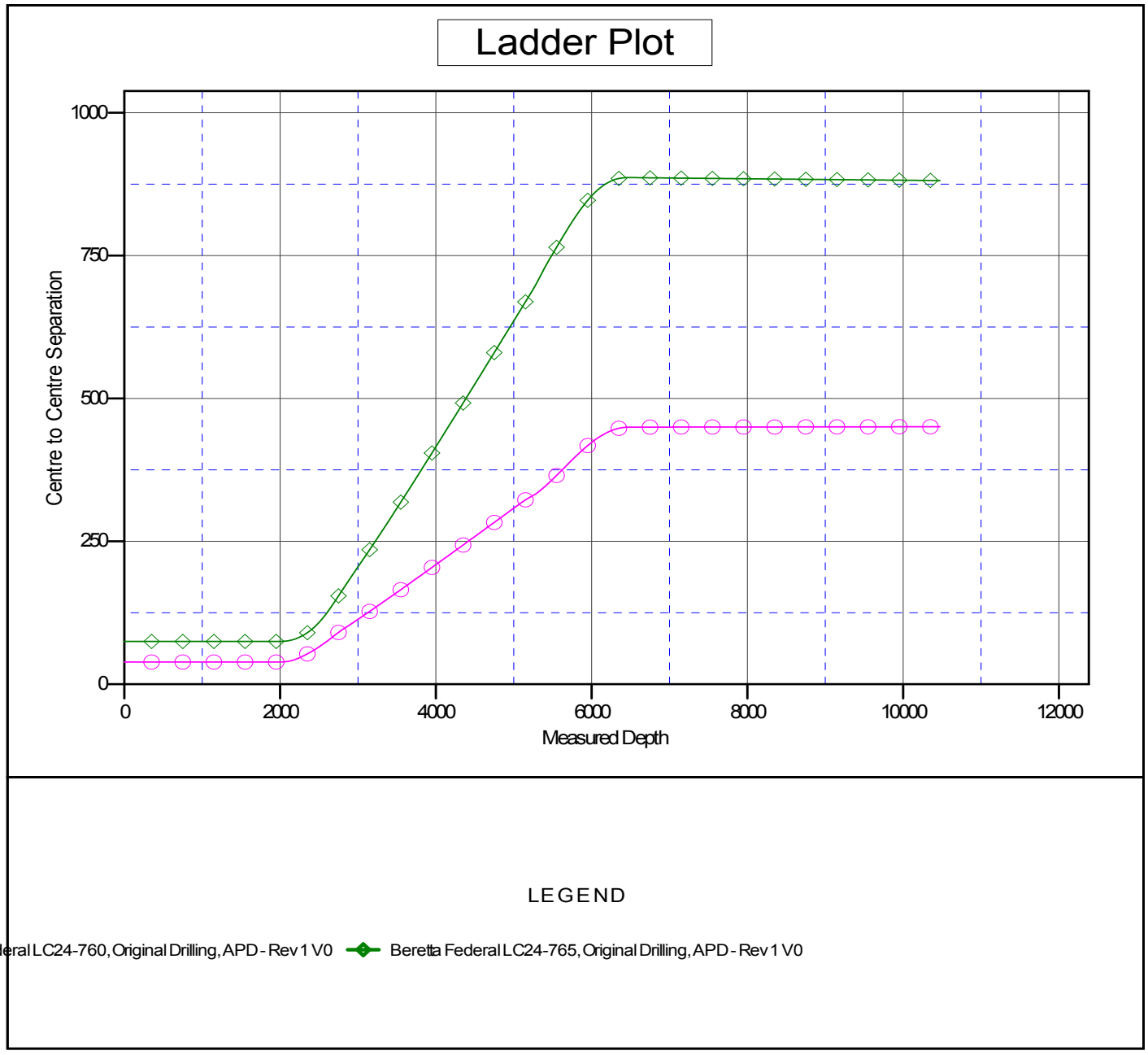
Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
LC (09N-59W)						
Beretta Federal LC24-760 - Original Drilling - APD - Rev	2,000.0	1,999.0	38.8	30.1	4.461	CC, ES
Beretta Federal LC24-760 - Original Drilling - APD - Rev	10,474.2	10,359.6	450.6	289.1	2.790	SF
Beretta Federal LC24-765 - Original Drilling - APD - Rev	2,000.0	1,999.0	74.8	66.1	8.604	CC, ES
Beretta Federal LC24-765 - Original Drilling - APD - Rev	10,474.2	10,499.0	881.4	716.5	5.344	SF

Company:	Northern Region Drilling - Working	**Local Co-ordinate Reference:**	Well Beretta Federal LC24-755
Project:	Wattenberg Field	**TVD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Reference Site:	LC (09N-59W)	**MD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Beretta Federal LC24-755	**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 @ 4889.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Beretta Federal LC24-755
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.02°



Company:	Northern Region Drilling - Working	**Local Co-ordinate Reference:**	Well Beretta Federal LC24-755
Project:	Wattenberg Field	**TVD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Reference Site:	LC (09N-59W)	**MD Reference:**	WELL @ 4889.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	Grid
Reference Well:	Beretta Federal LC24-755	**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 @ 4889.0ft (Original Well Elev)	Coordinates are relative to: Beretta Federal LC24-755
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000	Grid Convergence at Surface is: 1.02°