

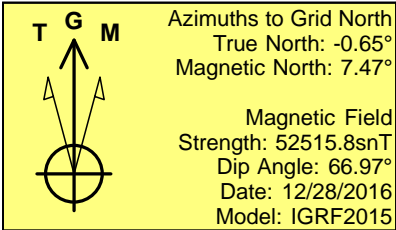
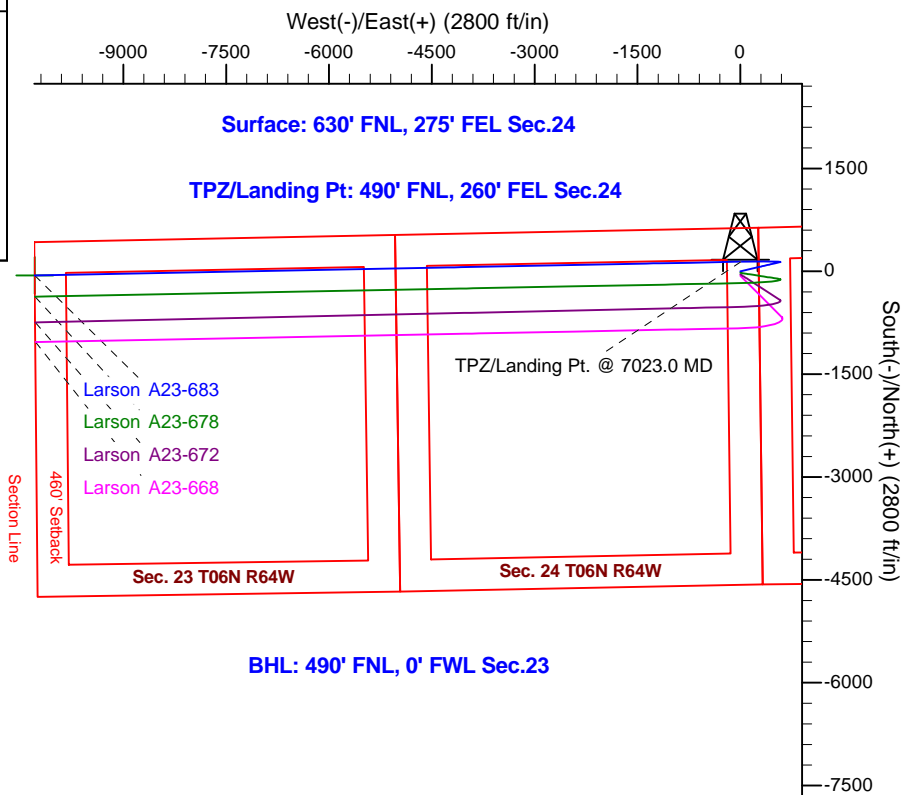
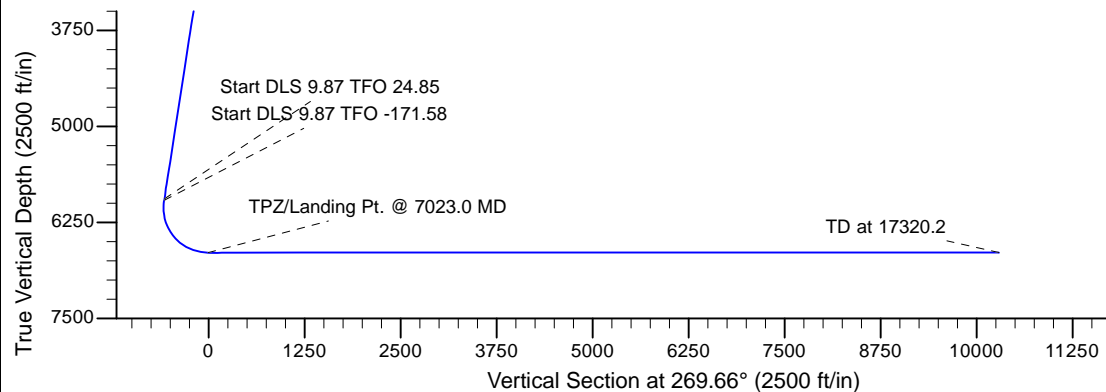
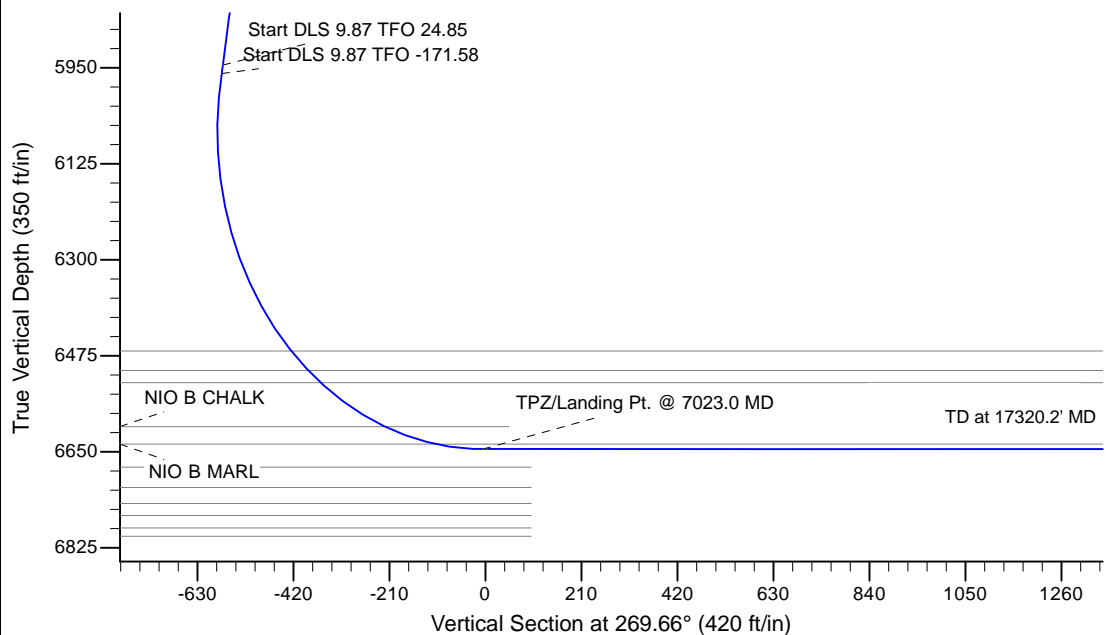
Project: Wells Ranch
Site: A Section 24-T6N-R64W Weld County, CO
Well: Larson A23-683
Wellbore: Original Drilling
Design: APD - Rev 0

Northern Region - DJ Basin

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	VSec	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	2450.0	9.00	77.00	2448.2	7.9	34.4	2.00	77.00	-34.4	
4	5990.4	9.00	77.00	5945.0	132.5	574.0	0.00	0.00	-574.8	
5	6006.1	10.43	80.60	5960.5	133.0	576.6	9.87	24.85	-577.4	
6	7023.0	90.00	268.88	6645.0	140.0	5.0	9.87	-171.58	-5.8	
7	17320.2	90.00	268.89	6645.0	-60.4	-10290.3	0.00	90.00	10290.5	Larson A23-683 BHL 490'FNL, 0'FWL



WELL DETAILS: Larson A23-683					
		Northing	Easting	Ground Elevation: 4652.0 Latitude	Longitude
0.0	0.0	1418321.64	3281032.62	40.4773000	-104.4897700
Plan: APD - Rev 0 (Larson A23-683/Original Drilling)					
Created By: Shailey Jewell			Date: 10:28, December 28 2016		
OK to submit with 2A as per Noble Drilling 3/24/2017 9:42					

Northern Region - DJ Basin

Wells Ranch

A Section 24

Larson A23-683

Original Drilling

APD - Rev 0

Anticollision Summary Report

28 December, 2016

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Larson A23-683
Project:	Wells Ranch	TVD Reference:	WELL @ 4682.0ft (Original Well Elev.)
Reference Site:	A Section 24	MD Reference:	WELL @ 4682.0ft (Original Well Elev.)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Larson A23-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.79 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Reference	APD - Rev 0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	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:	Pedal Curve
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	12/28/2016		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	17,320.2	APD - Rev 0 (Original Drilling)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction

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						
A Section 23						
Cecil 23-13 - Original Drilling - Original Drilling - As Drille	14,320.3	6,596.4	1,254.5	1,093.5	7.793	CC, ES
Cecil 23-13 - Original Drilling - Original Drilling - As Drille	14,400.0	6,595.4	1,257.0	1,094.9	7.755	SF
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	16,734.6	6,647.0	2,680.8	2,305.2	7.137	CC
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	16,800.0	6,647.0	2,681.6	2,304.9	7.118	ES
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	17,000.0	6,647.0	2,693.9	2,314.4	7.098	SF
Champlin 23-03 - Original Drilling - Original Drilling - As D	15,613.9	6,600.0	3,963.3	3,778.1	21.407	CC
Champlin 23-03 - Original Drilling - Original Drilling - As D	15,700.0	6,600.0	3,964.2	3,777.5	21.235	ES
Champlin 23-03 - Original Drilling - Original Drilling - As D	16,400.0	6,600.0	4,040.5	3,844.3	20.596	SF
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	15,777.6	6,622.0	4,018.6	3,661.6	11.256	CC
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	15,800.0	6,622.0	4,018.7	3,661.2	11.243	ES
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	16,300.0	6,622.0	4,052.4	3,687.3	11.098	SF
Cooper 23-1-17 - Original Drilling - Original Drilling - As Dr	13,386.4	6,618.8	183.9	40.2	1.280	Level 3, CC, ES, SF
Cooper 23-1-19 - Original Drilling - Original Drilling - As D	14,524.8	6,625.5	642.9	477.9	3.898	CC, ES, SF
Cooper 23-1-20 - Original Drilling - Original Drilling - As Dri	13,989.6	6,632.3	170.8	15.8	1.102	Level 2, CC, ES, SF
Cooper 23-1-20 - Original Drilling - Original Drilling - As D	14,522.5	6,567.0	1,989.2	1,824.3	12.062	CC, ES
Cooper 23-1-20 - Original Drilling - Original Drilling - As D	14,800.0	6,566.5	2,008.5	1,840.0	11.918	SF
Cooper 23-15 - Original Drilling - Original Drilling - As Dri	13,339.9	6,638.5	722.9	579.4	5.038	CC, ES
Cooper 23-15 - Original Drilling - Original Drilling - As Dri	13,400.0	6,638.3	725.4	581.4	5.036	SF
Foss 41-23D - Original Drilling - Original Drilling - As Drill	12,690.6	6,889.5	158.0	24.5	1.184	Level 2, CC, ES, SF
Foss 42-23 - Original Drilling - Original Drilling - As Drille	12,910.0	6,624.8	1,600.6	1,465.7	11.864	CC, ES
Foss 42-23 - Original Drilling - Original Drilling - As Drille	13,100.0	6,624.9	1,611.9	1,474.4	11.724	SF
J&L Farms 23-11 - Original Drilling - Original Drilling - As	16,794.3	6,648.3	111.6	-95.8	0.538	Level 1, CC, ES, SF
J&L Farms 23-12 - Original Drilling - Original Drilling - As	16,913.3	6,728.6	1,598.9	1,388.9	7.613	CC, ES
J&L Farms 23-12 - Original Drilling - Original Drilling - As	17,000.0	6,731.2	1,601.2	1,390.0	7.578	SF
J&L Farms 23-21 - Original Drilling - Original Drilling - As	15,176.6	6,637.5	96.5	-80.6	0.545	Level 1, CC, ES, SF
J&L Farms 23-22 - Original Drilling - Original Drilling - As	15,426.1	6,681.1	1,385.2	1,203.1	7.606	CC, ES
J&L Farms 23-22 - Original Drilling - Original Drilling - As	15,500.0	6,682.8	1,387.2	1,203.9	7.570	SF
McIntosh 33-23 - Original Drilling - Original Drilling - As D	14,027.0	6,468.1	2,919.0	2,764.0	18.829	CC
McIntosh 33-23 - Original Drilling - Original Drilling - As D	14,100.0	6,470.0	2,919.9	2,763.6	18.678	ES
McIntosh 33-23 - Original Drilling - Original Drilling - As D	14,600.0	6,484.6	2,974.7	2,811.9	18.268	SF
McIntosh 34-23 - Original Drilling - Original Drilling - As D	13,911.5	6,559.6	4,041.4	3,888.1	26.361	CC
McIntosh 34-23 - Original Drilling - Original Drilling - As D	14,000.0	6,560.1	4,042.3	3,887.5	26.097	ES
McIntosh 34-23 - Original Drilling - Original Drilling - As D	14,900.0	6,564.9	4,160.5	3,993.4	24.890	SF
McIntosh 43-23 - Original Drilling - Original Drilling - As D	12,545.8	6,583.5	2,653.1	2,525.1	20.717	CC
McIntosh 43-23 - Original Drilling - Original Drilling - As D	12,600.0	6,583.6	2,653.7	2,524.7	20.568	ES
McIntosh 43-23 - Original Drilling - Original Drilling - As D	13,100.0	6,584.8	2,710.4	2,574.8	19.989	SF
McIntosh 44-23 - Original Drilling - Original Drilling - As D	12,486.0	6,489.7	4,228.6	4,101.9	33.376	CC

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Larson A23-683
Project:	Wells Ranch	TVD Reference:	WELL @ 4682.0ft (Original Well Elev.)
Reference Site:	A Section 24	MD Reference:	WELL @ 4682.0ft (Original Well Elev.)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Larson A23-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.79 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

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
A Section 23						
McIntosh 44-23 - Original Drilling - Original Drilling - As D	12,600.0	6,496.1	4,230.1	4,101.3	32.856	ES
McIntosh 44-23 - Original Drilling - Original Drilling - As D	13,800.0	6,554.2	4,427.5	4,282.4	30.531	SF
Schroeder 23-31 - Original Drilling - Original Drilling - As	15,192.3	6,558.1	2,976.6	2,799.5	16.803	CC
Schroeder 23-31 - Original Drilling - Original Drilling - As	15,200.0	6,558.0	2,976.6	2,799.3	16.790	ES
Schroeder 23-31 - Original Drilling - Original Drilling - As	15,700.0	6,556.0	3,019.6	2,835.5	16.406	SF
Schroeder 23-33 - Original Drilling - Original Drilling - As	16,861.7	6,630.3	4,271.4	4,062.7	20.464	CC
Schroeder 23-33 - Original Drilling - Original Drilling - As	16,900.0	6,629.9	4,271.6	4,062.2	20.397	ES
Schroeder 23-33 - Original Drilling - Original Drilling - As	17,320.2	6,625.6	4,296.0	4,079.9	19.884	SF
A Section 24						
Larson A23-668 - Original Drilling - APD - Rev 0	2,000.0	2,000.0	65.6	53.4	5.404	CC, ES
Larson A23-668 - Original Drilling - APD - Rev 0	17,320.2	17,458.0	975.2	573.7	2.429	SF
Larson A23-672 - Original Drilling - APD - Rev 0	2,000.0	2,000.0	43.7	31.6	3.603	CC
Larson A23-672 - Original Drilling - APD - Rev 0	2,100.0	2,100.0	44.1	31.4	3.461	ES
Larson A23-672 - Original Drilling - APD - Rev 0	17,320.2	17,439.3	772.1	400.7	2.079	SF
Larson A23-678 - Original Drilling - APD - Rev 0	2,000.0	2,001.0	21.9	9.7	1.801	CC
Larson A23-678 - Original Drilling - APD - Rev 0	17,320.2	17,389.1	317.2	-79.1	0.800	Level 1, ES, SF
Larson Farms 01-24 - Original Drilling - Original Drilling -	7,438.5	6,846.4	157.5	94.5	2.500	CC, ES, SF
Larson Farms 02-24 - Original Drilling - Original Drilling -	7,397.3	6,797.3	1,466.5	1,403.1	23.131	CC
Larson Farms 02-24 - Original Drilling - Original Drilling -	7,400.0	6,797.3	1,466.5	1,403.1	23.130	ES
Larson Farms 02-24 - Original Drilling - Original Drilling -	7,500.0	6,795.8	1,470.1	1,406.5	23.112	SF
Larson Farms 03-24 - Original Drilling - Original Drilling -	8,726.9	6,725.8	2,755.1	2,681.5	37.452	CC
Larson Farms 03-24 - Original Drilling - Original Drilling -	8,800.0	6,725.4	2,756.0	2,681.4	36.945	ES
Larson Farms 03-24 - Original Drilling - Original Drilling -	9,600.0	6,721.2	2,890.1	2,806.4	34.531	SF
Larson Farms 04-24 - Original Drilling - Original Drilling -	7,436.7	7,150.7	2,764.7	2,673.7	30.402	CC, ES
Larson Farms 04-24 - Original Drilling - Original Drilling -	7,900.0	7,150.3	2,803.2	2,709.1	29.777	SF
Larson Farms 05-24 - Original Drilling - Original Drilling -	8,134.5	6,998.0	3,380.4	3,300.0	42.059	CC, ES
Larson Farms 05-24 - Original Drilling - Original Drilling -	9,000.0	6,986.5	3,489.4	3,402.5	40.124	SF
Larson Farms 06-24 - Original Drilling - Original Drilling -	2,095.6	2,327.0	3,395.5	3,369.5	130.424	CC
Larson Farms 06-24 - Original Drilling - Original Drilling -	2,100.0	2,327.0	3,395.5	3,369.5	130.356	ES
Larson Farms 06-24 - Original Drilling - Original Drilling -	7,200.0	7,200.0	4,049.4	3,959.3	44.915	SF
Larson Farms 07-24 - Original Drilling - Original Drilling -	914.9	889.0	3,537.6	3,532.5	693.601	CC, ES
Larson Farms 07-24 - Original Drilling - Original Drilling -	10,600.0	7,052.2	4,486.7	4,391.7	47.235	SF
Peppler 24-32 - Original Drilling - Original Drilling - As Dr	11,551.9	6,651.0	2,560.3	2,450.3	23.286	CC
Peppler 24-32 - Original Drilling - Original Drilling - As Dr	11,600.0	6,651.1	2,560.7	2,449.9	23.112	ES
Peppler 24-32 - Original Drilling - Original Drilling - As Dr	12,100.0	6,672.8	2,618.2	2,500.5	22.253	SF
Roth 24-21 - Original Drilling - Original Drilling - As Drilled	10,107.0	6,612.6	225.5	141.8	2.695	CC, ES, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Larson A23-683
Project:	Wells Ranch	TVD Reference:	WELL @ 4682.0ft (Original Well Elev.)
Reference Site:	A Section 24	MD Reference:	WELL @ 4682.0ft (Original Well Elev.)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Larson A23-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.79 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

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						
AA Section 19						
J&L Farms 31-19 - Original Drilling - Original Drilling - As	6,105.0	6,013.0	2,708.5	2,674.6	80.030	CC, ES
J&L Farms 31-19 - Original Drilling - Original Drilling - As	6,450.0	6,449.8	2,807.3	2,771.3	77.946	SF
J&L Farms 32-19 - Original Drilling - Original Drilling - As	6,106.8	6,062.7	3,068.0	3,033.9	89.997	CC, ES
J&L Farms 32-19 - Original Drilling - Original Drilling - As	6,350.0	6,358.6	3,107.9	3,072.7	88.229	SF
J&L Farms 41-19 - Original Drilling - Original Drilling - As	6,114.2	6,068.5	3,967.3	3,933.4	117.125	CC, ES
J&L Farms 41-19 - Original Drilling - Original Drilling - As	6,350.0	6,297.3	4,014.8	3,979.9	115.139	SF
J&L Farms 42-19 - Original Drilling - Original Drilling - As	6,094.9	5,952.8	4,653.4	4,619.7	137.783	CC
J&L Farms 42-19 - Original Drilling - Original Drilling - As	6,100.0	5,957.4	4,653.5	4,619.7	137.682	ES
J&L Farms 42-19 - Original Drilling - Original Drilling - As	6,350.0	6,164.6	4,705.8	4,671.0	135.238	SF
Larson USX AA19-03 - Original Drilling - Original Drilling	6,095.1	5,986.2	1,755.5	1,721.6	51.758	CC
Larson USX AA19-03 - Original Drilling - Original Drilling	6,100.0	5,990.3	1,755.6	1,721.6	51.723	ES
Larson USX AA19-03 - Original Drilling - Original Drilling	6,200.0	6,099.7	1,764.7	1,730.3	51.240	SF
Larson USX AA19-04 - Original Drilling - Original Drilling	6,074.8	5,975.7	548.3	514.4	16.204	CC, ES
Larson USX AA19-04 - Original Drilling - Original Drilling	6,150.0	6,050.1	552.7	518.5	16.154	SF
Larson USX AA19-05 - Original Drilling - Original Drilling	5,031.5	4,948.0	1,549.2	1,521.0	54.953	CC
Larson USX AA19-05 - Original Drilling - Original Drilling	5,300.0	5,209.3	1,550.1	1,520.4	52.034	ES
Larson USX AA19-05 - Original Drilling - Original Drilling	6,350.0	6,241.2	1,581.8	1,546.2	44.494	SF
Larson USX AA19-06 - Original Drilling - Original Drilling	6,077.0	5,954.4	1,974.7	1,940.8	58.277	CC, ES
Larson USX AA19-06 - Original Drilling - Original Drilling	6,250.0	6,109.2	1,994.5	1,959.8	57.584	SF
Thrall USX AA19-11 - Original Drilling - Original Drilling -	6,096.4	6,056.1	3,383.3	3,348.8	98.168	CC
Thrall USX AA19-11 - Original Drilling - Original Drilling -	6,100.0	6,060.0	3,383.3	3,348.8	98.115	ES
Thrall USX AA19-11 - Original Drilling - Original Drilling -	6,400.0	6,357.6	3,421.5	3,385.8	95.890	SF
Thrall USX AA19-12 - Original Drilling - Original Drilling -	459.4	424.4	2,577.9	2,575.8	1,199.826	CC
Thrall USX AA19-12 - Original Drilling - Original Drilling -	3,800.0	3,746.3	2,580.0	2,559.0	123.409	ES
Thrall USX AA19-12 - Original Drilling - Original Drilling -	8,100.0	6,611.5	3,159.2	3,113.4	68.995	SF
Thrall USX AA19-13 - Original Drilling - Original Drilling -	5,069.2	5,043.4	4,035.0	4,006.5	141.199	CC
Thrall USX AA19-13 - Original Drilling - Original Drilling -	5,100.0	5,063.0	4,035.1	4,006.3	140.421	ES
Thrall USX AA19-13 - Original Drilling - Original Drilling -	9,800.0	6,622.4	5,519.4	5,456.5	87.736	SF
Thrall USX AA19-14 - Original Drilling - Original Drilling -	6,054.3	5,950.7	4,493.1	4,458.8	130.923	CC, ES
Thrall USX AA19-14 - Original Drilling - Original Drilling -	9,900.0	6,364.7	6,491.0	6,431.1	108.427	SF
Thrall USX AA19-25 - Original Drilling - Original Drilling -	6,046.2	5,970.5	3,200.8	3,166.5	93.272	CC
Thrall USX AA19-25 - Original Drilling - Original Drilling -	6,050.0	5,974.5	3,200.8	3,166.4	93.212	ES
Thrall USX AA19-25 - Original Drilling - Original Drilling -	8,500.0	6,597.9	4,175.4	4,127.2	86.605	SF
Wells Ranch USX AA19-09 - Original Drilling - Original D	6,100.5	6,028.7	4,953.8	4,919.7	145.236	CC, ES
Wells Ranch USX AA19-09 - Original Drilling - Original D	6,400.0	6,345.2	5,016.0	4,980.6	141.772	SF
Wells Ranch USX AA19-10 - Original Drilling - Original D	6,094.8	6,018.2	3,932.6	3,898.5	115.267	CC
Wells Ranch USX AA19-10 - Original Drilling - Original D	6,100.0	6,024.5	3,932.6	3,898.5	115.169	ES
Wells Ranch USX AA19-10 - Original Drilling - Original D	6,400.0	6,323.9	3,988.6	3,953.3	112.795	SF
Wells Ranch USX AA19-15 - Original Drilling - Original D	6,104.4	6,109.4	4,885.3	4,850.4	140.096	CC, ES
Wells Ranch USX AA19-15 - Original Drilling - Original D	9,300.0	6,724.0	6,872.6	6,814.3	117.870	SF
Wells Ranch USX AA19-16 - Original Drilling - Original D	6,079.9	5,920.4	5,922.5	5,888.6	174.661	CC, ES
Wells Ranch USX AA19-16 - Original Drilling - Original D	6,450.0	6,233.6	6,004.2	5,968.9	170.196	SF
Wells Ranch USX AA19-23 - Original Drilling - Original D	6,123.3	6,221.7	4,964.0	4,929.2	142.831	CC, ES
Wells Ranch USX AA19-23 - Original Drilling - Original D	6,400.0	6,378.0	5,012.8	4,977.2	140.890	SF

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Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Larson A23-683
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Well Error:	0.0 ft	Output errors are at	2.79 sigma
Reference Wellbore	Original Drilling	Database:	EDM Produccction
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
AA Section 20						
Cook 20D - Original Drilling - Original Drilling - As Drilled	6,098.1	5,933.4	9,375.3	9,341.7	278.958	CC
Cook 20D - Original Drilling - Original Drilling - As Drilled	6,100.0	5,935.7	9,375.3	9,341.7	278.868	ES
Cook 20D - Original Drilling - Original Drilling - As Drilled	6,450.0	6,319.0	9,471.1	9,436.0	269.629	SF
Cook 33-20 - Original Drilling - Original Drilling - As Drille	6,099.6	5,960.4	8,509.4	8,475.7	252.799	CC
Cook 33-20 - Original Drilling - Original Drilling - As Drille	6,100.0	5,960.9	8,509.4	8,475.7	252.782	ES
Cook 33-20 - Original Drilling - Original Drilling - As Drille	6,450.0	6,337.4	8,604.3	8,569.1	244.864	SF
Cook 34-20 - Original Drilling - Original Drilling - As Drilled	6,108.1	6,123.8	8,947.5	8,912.7	257.165	CC, ES
Cook 34-20 - Original Drilling - Original Drilling - As Drilled	6,550.0	6,470.0	9,092.4	9,056.2	251.134	SF
Cook 43-20 - Original Drilling - Original Drilling - As Drille						Out of range
Cook 44-20 - Original Drilling - Original Drilling - As Drille						Out of range
J&L Farms 01-20 - Original Drilling - Original Drilling - As	6,110.2	6,049.4	9,455.4	9,418.8	258.798	CC, ES
J&L Farms 01-20 - Original Drilling - Original Drilling - As	6,450.0	6,270.2	9,553.3	9,515.5	253.097	SF
J&L Farms 02-20 - Original Drilling - Original Drilling - As	6,111.3	6,062.9	8,158.7	8,124.4	238.344	CC, ES
J&L Farms 02-20 - Original Drilling - Original Drilling - As	6,450.0	6,358.5	8,255.2	8,219.7	232.557	SF
J&L Farms 08-20 - Original Drilling - Original Drilling - As	6,108.4	6,052.1	9,587.9	9,399.9	50.981	CC, ES
J&L Farms 08-20 - Original Drilling - Original Drilling - As	6,650.0	6,519.3	9,820.1	9,618.4	48.674	SF
J&L Farms 11-20 - Original Drilling - Original Drilling - As	6,088.6	5,816.5	5,296.2	5,262.9	159.207	CC, ES
J&L Farms 11-20 - Original Drilling - Original Drilling - As	6,450.0	6,490.0	5,397.1	5,361.6	152.211	SF
J&L Farms 12-20 - Original Drilling - Original Drilling - As	6,105.4	6,032.0	5,480.8	5,446.6	160.041	CC, ES
J&L Farms 12-20 - Original Drilling - Original Drilling - As	6,400.0	6,315.3	5,551.1	5,515.7	156.823	SF
J&L Farms 22-20 - Original Drilling - Original Drilling - As	6,106.6	6,034.8	6,947.3	6,913.5	205.435	CC, ES
J&L Farms 22-20 - Original Drilling - Original Drilling - As	6,450.0	6,342.3	7,043.8	7,008.7	200.554	SF
J&L Farms 32-20 - Original Drilling - Original Drilling - As	6,117.8	6,198.2	8,324.2	8,290.0	243.272	CC, ES
J&L Farms 32-20 - Original Drilling - Original Drilling - As	6,450.0	6,426.1	8,416.7	8,381.4	238.406	SF
Wells Ranch 13-20 - Original Drilling - Original Drilling - A	6,107.0	6,082.7	6,223.2	6,189.0	182.236	CC, ES
Wells Ranch 13-20 - Original Drilling - Original Drilling - A	6,450.0	6,403.1	6,310.5	6,275.1	177.827	SF
Wells Ranch 14-20 - Original Drilling - Original Drilling - A	6,107.1	6,119.9	6,966.0	6,931.8	203.131	CC, ES
Wells Ranch 14-20 - Original Drilling - Original Drilling - A	6,450.0	6,360.8	7,045.2	7,009.8	198.943	SF
Wells Ranch 23-20 - Original Drilling - Original Drilling - A	6,100.5	5,989.8	7,553.3	7,519.2	221.352	CC, ES
Wells Ranch 23-20 - Original Drilling - Original Drilling - A	6,400.0	6,247.9	7,623.1	7,587.9	216.400	SF
Wells Ranch 24-20 - Original Drilling - Original Drilling - A	6,095.5	5,967.8	7,865.0	7,831.0	231.402	CC
Wells Ranch 24-20 - Original Drilling - Original Drilling - A	6,100.0	5,971.3	7,865.0	7,831.0	231.266	ES
Wells Ranch 24-20 - Original Drilling - Original Drilling - A	6,550.0	6,363.0	8,007.3	7,971.8	225.449	SF

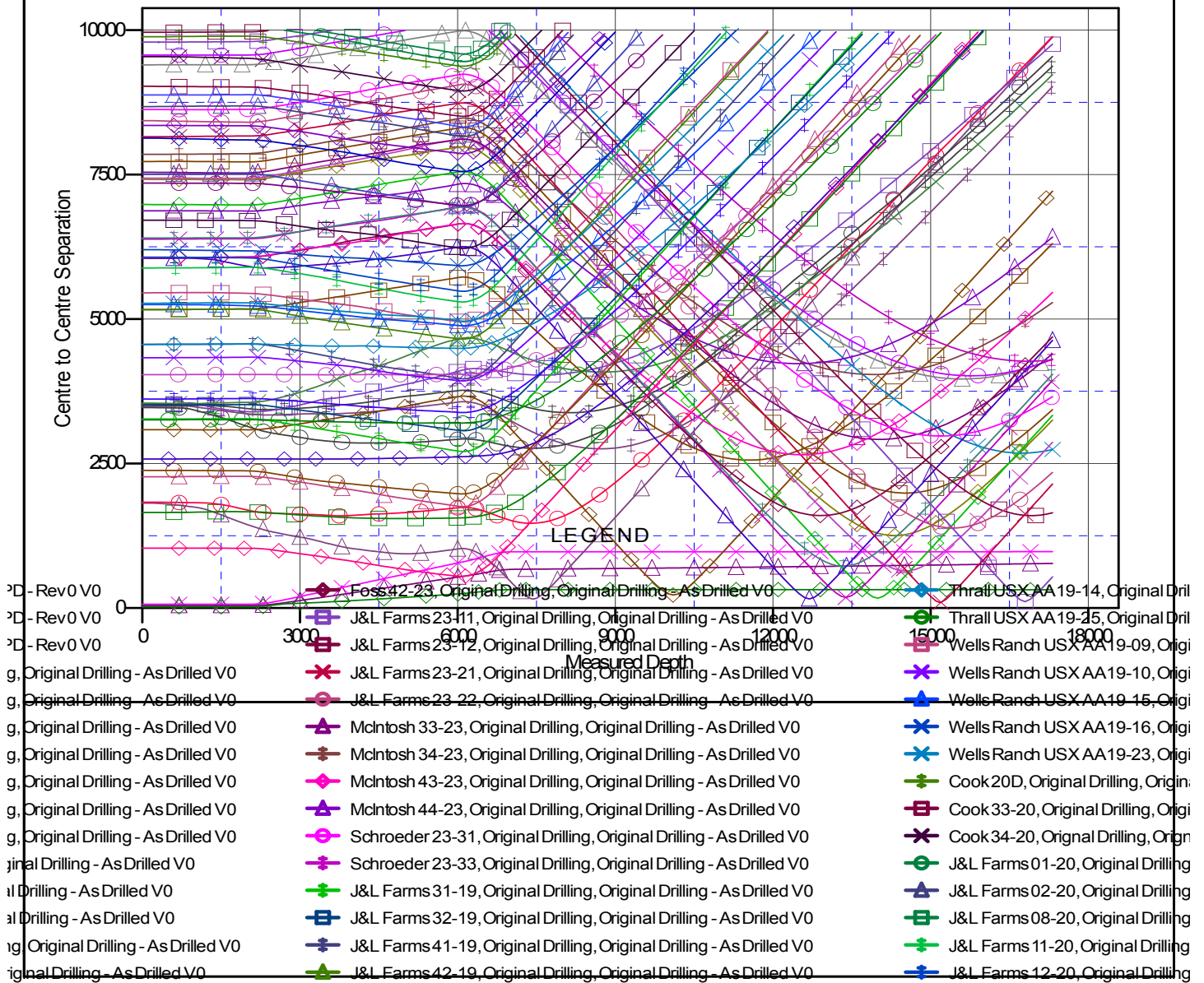
Anticollision Summary Report

Company:	Northern Region - DJ Basin	Local Co-ordinate Reference:	Well Larson A23-683
Project:	Wells Ranch	TVD Reference:	WELL @ 4682.0ft (Original Well Elev.)
Reference Site:	A Section 24	MD Reference:	WELL @ 4682.0ft (Original Well Elev.)
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Larson A23-683	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.79 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4682.0ft (Original Well Elev.)
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Larson A23-683
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.65°

Ladder Plot



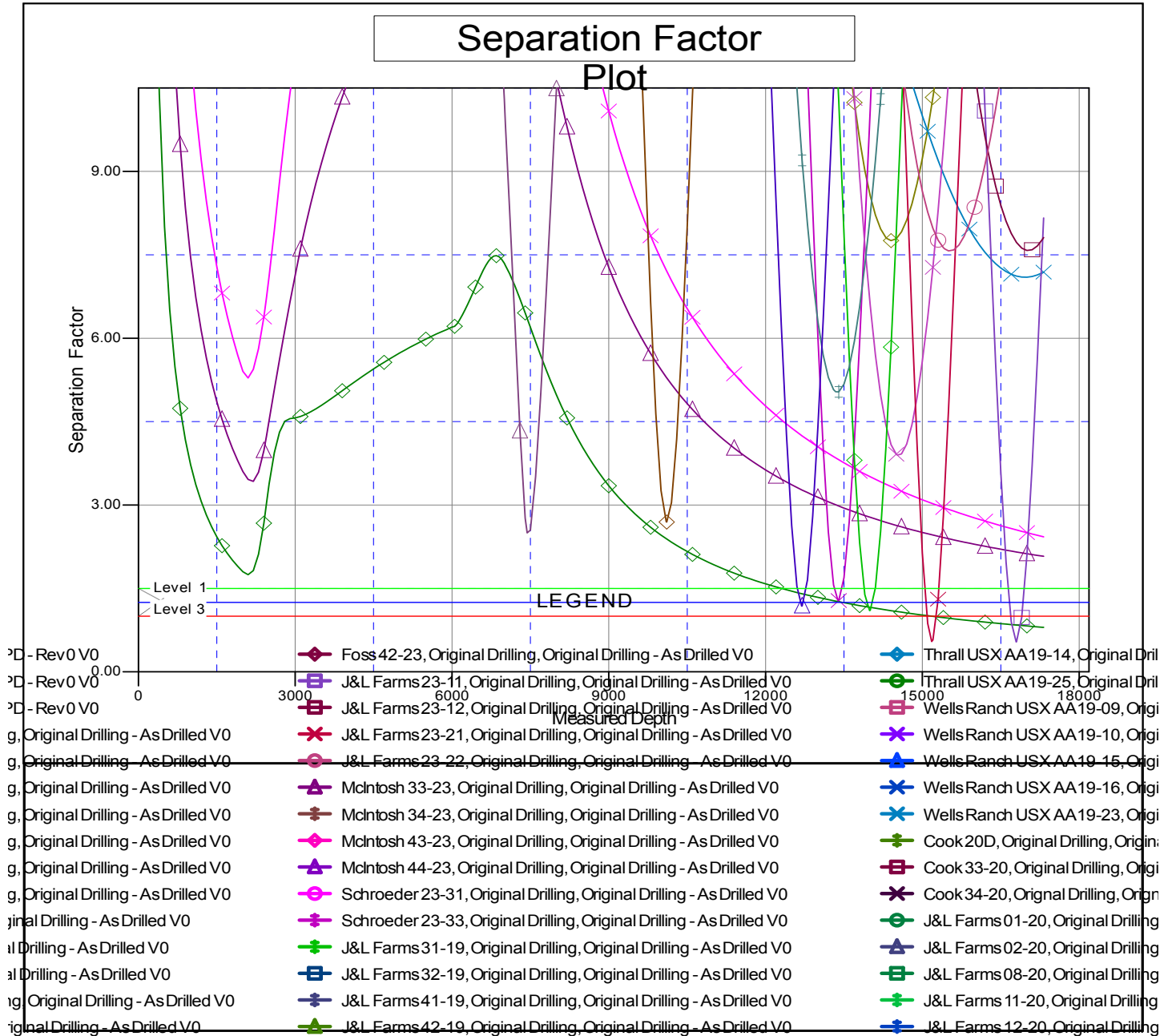
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Summary Report

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 Offset Depths are relative to Offset Datum
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Coordinates are relative to: Larson A23-683
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.65°



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