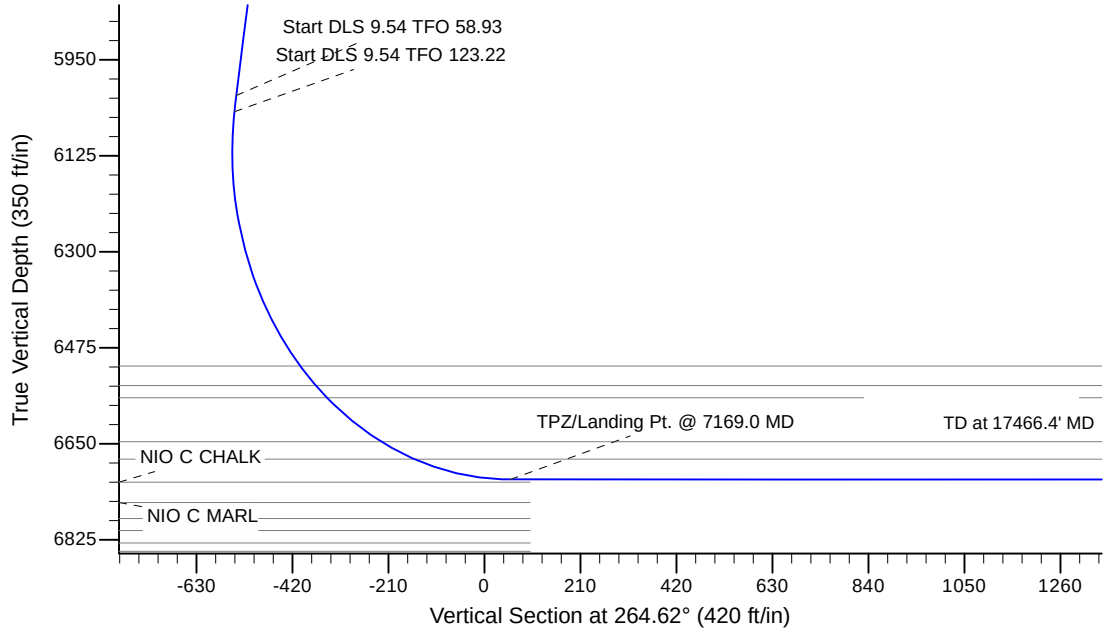
Project: Wells Ranch
Site: A Section 24-T6N-R64W Weld County, CO
Well: Larson A23-668
Wellbore: Original Drilling
Design: APD - Rev 0

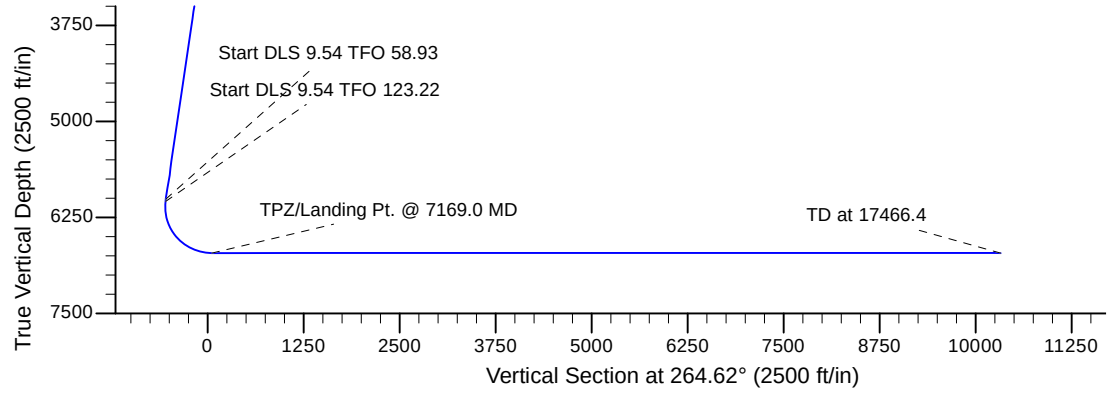
Northern Region - DJ Basin

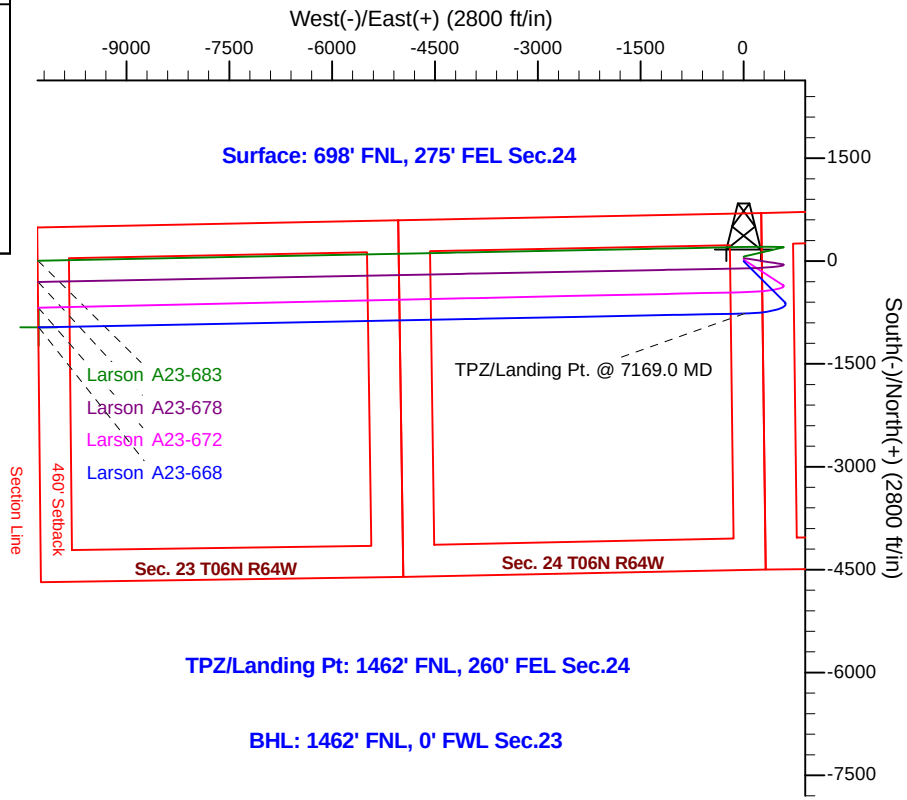
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

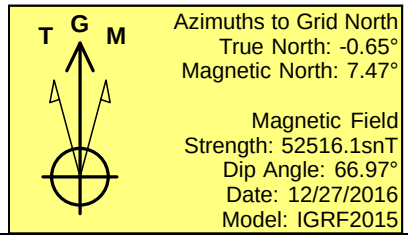
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	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	2650.0	13.00	135.00	2644.4	-51.9	51.9	2.00	135.00	-46.8	
4	6109.2	13.00	135.00	6015.0	-602.2	602.2	0.00	0.00	-543.1	
5	6139.4	14.69	144.77	6044.3	-607.7	606.8	9.54	58.93	-547.2	
6	7169.0	90.00	268.87	6715.0	-765.0	15.0	9.54	123.22	56.7	
7	17466.4	90.00	268.88	6715.0	-967.5	-10280.4	0.00	90.00	10325.8	Larson A23-668 BHL 1462'FNL, 0'FWL









WELL DETAILS: Larson A23-668

Ground Elevation: 4652.0

		Northing	Easting	Latitude	Longitude
0.0	0.0	1418256.07	3281033.37	40.4771200	-104.4897700

Plan: APD - Rev 0 (Larson A23-668/Original Drilling)

Created By: Shailey Jewell Date: 11:12, December 28 2016

OK to submit with 2A as per Noble Drilling
12/28/2016 11:21

Northern Region - DJ Basin

Wells Ranch
A Section 24
Larson A23-668

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 A23-668
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 A23-668	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.79 sigma
Reference Wellbore	Original Drilling	**Database:**	EDM Producction
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	17,466.4	APD - Rev 0 (Original Drilling)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction

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						
Cecil 23-13 - Original Drilling - Original Drilling - As Drille	14,457.1	6,686.1	283.7	122.4	1.759	CC, ES, SF
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	16,872.9	6,717.0	1,708.3	1,330.7	4.525	CC
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	16,900.0	6,717.0	1,708.5	1,330.4	4.518	ES
Champlin 23-02 (PA) - Original Drilling - Original Drilling -	17,000.0	6,717.0	1,713.0	1,333.3	4.511	SF
Champlin 23-03 - Original Drilling - Original Drilling - As D	15,752.2	6,676.4	2,991.4	2,806.1	16.137	CC
Champlin 23-03 - Original Drilling - Original Drilling - As D	15,800.0	6,676.0	2,991.8	2,805.5	16.057	ES
Champlin 23-03 - Original Drilling - Original Drilling - As D	16,300.0	6,671.2	3,041.2	2,847.6	15.708	SF
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	15,916.2	6,692.0	3,046.3	2,687.3	8.486	CC
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	16,000.0	6,692.0	3,047.5	2,686.8	8.450	ES
Champlin Amoco A 1 #308 - Original Drilling - Original Dr	16,300.0	6,692.0	3,070.4	2,705.0	8.403	SF
Cooper 23-1-17 - Orignal Drilling - Orignal Drilling - As Dr	13,523.9	6,713.8	1,155.8	1,011.8	8.028	CC, ES
Cooper 23-1-17 - Orignal Drilling - Orignal Drilling - As Dr	13,600.0	6,714.2	1,158.3	1,013.5	7.999	SF
Cooper 23-1-19 - Original Drilling - Original Drilling - As D	14,661.9	6,682.6	330.0	165.0	2.000	CC, ES, SF
Cooper 23-12 - Original Drilling - Original Drilling - As Dri	14,126.8	6,703.2	801.0	645.8	5.159	CC, ES, SF
Cooper 23-1-20 - Original Drilling - Original Drilling - As D	14,660.2	6,657.4	1,018.6	853.3	6.163	CC
Cooper 23-1-20 - Original Drilling - Original Drilling - As D	14,700.0	6,657.2	1,019.3	853.2	6.137	ES, SF
Cooper 23-15 - Original Drilling - Original Drilling - As Dri	13,477.6	6,722.7	250.6	107.0	1.746	CC, ES, SF
Foss 41-23D - Original Drilling - Original Drilling - As Drill	12,827.7	6,951.0	814.3	680.7	6.096	CC, ES, SF
Foss 42-23 - Original Drilling - Original Drilling - As Drille	13,047.9	6,691.3	628.8	493.7	4.654	CC, ES
Foss 42-23 - Original Drilling - Original Drilling - As Drille	13,100.0	6,691.2	631.0	494.9	4.637	SF
J&L Farms 23-11 - Original Drilling - Original Drilling - As	16,932.3	6,715.5	861.2	653.7	4.150	CC, ES, SF
J&L Farms 23-12 - Original Drilling - Original Drilling - As	17,052.1	6,758.5	624.2	414.3	2.974	CC, ES
J&L Farms 23-12 - Original Drilling - Original Drilling - As	17,100.0	6,759.5	626.1	415.5	2.973	SF
J&L Farms 23-21 - Original Drilling - Original Drilling - As	15,313.5	6,693.9	1,069.5	892.3	6.036	CC, ES
J&L Farms 23-21 - Original Drilling - Original Drilling - As	15,400.0	6,692.7	1,073.0	895.1	6.032	SF
J&L Farms 23-22 - Original Drilling - Original Drilling - As	15,564.9	6,720.6	411.3	229.1	2.258	CC, ES, SF
McIntosh 33-23 - Original Drilling - Original Drilling - As D	14,169.1	6,587.2	1,951.4	1,795.7	12.535	CC
McIntosh 33-23 - Original Drilling - Original Drilling - As D	14,200.0	6,588.4	1,951.6	1,795.3	12.486	ES
McIntosh 33-23 - Original Drilling - Original Drilling - As D	14,400.0	6,596.8	1,965.0	1,805.4	12.312	SF
McIntosh 34-23 - Original Drilling - Original Drilling - As D	14,050.6	6,639.0	3,070.2	2,916.6	19.987	CC
McIntosh 34-23 - Original Drilling - Original Drilling - As D	14,100.0	6,639.4	3,070.6	2,916.0	19.864	ES
McIntosh 34-23 - Original Drilling - Original Drilling - As D	14,700.0	6,644.2	3,138.1	2,974.5	19.187	SF
McIntosh 43-23 - Original Drilling - Original Drilling - As D	12,684.0	6,654.2	1,682.3	1,554.0	13.106	CC
McIntosh 43-23 - Original Drilling - Original Drilling - As D	12,700.0	6,654.1	1,682.4	1,553.7	13.073	ES
McIntosh 43-23 - Original Drilling - Original Drilling - As D	12,900.0	6,653.1	1,696.1	1,564.1	12.847	SF
McIntosh 44-23 - Original Drilling - Original Drilling - As D	12,629.4	6,600.9	3,258.9	3,131.7	25.609	CC
McIntosh 44-23 - Original Drilling - Original Drilling - As D	12,700.0	6,603.0	3,259.7	3,131.0	25.340	ES

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

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Larson A23-668
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 A23-668	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.79 sigma
Reference Wellbore	Original Drilling	**Database:**	EDM Producction
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	13,500.0	6,617.4	3,373.2	3,232.7	24.021	SF
Schroeder 23-31 - Original Drilling - Original Drilling - As	15,330.2	6,656.2	2,006.5	1,829.0	11.302	CC
Schroeder 23-31 - Original Drilling - Original Drilling - As	15,400.0	6,655.9	2,007.7	1,828.8	11.222	ES
Schroeder 23-31 - Original Drilling - Original Drilling - As	15,600.0	6,654.9	2,024.6	1,842.8	11.138	SF
Schroeder 23-33 - Original Drilling - Original Drilling - As	16,999.8	6,695.5	3,299.2	3,090.3	15.793	CC
Schroeder 23-33 - Original Drilling - Original Drilling - As	17,100.0	6,695.0	3,300.7	3,089.9	15.655	ES
Schroeder 23-33 - Original Drilling - Original Drilling - As	17,466.4	6,692.8	3,332.0	3,115.6	15.400	SF
A Section 24						
Larson A23-672 - Original Drilling - APD - Rev 0	2,000.0	2,000.0	21.9	9.7	1.801	CC, ES
Larson A23-672 - Original Drilling - APD - Rev 0	17,466.4	17,454.9	406.4	78.6	1.240	Level 2, SF
Larson A23-678 - Original Drilling - APD - Rev 0	2,000.0	2,001.0	43.7	31.6	3.602	CC, ES
Larson A23-678 - Original Drilling - APD - Rev 0	17,466.4	17,397.1	663.0	260.5	1.647	SF
Larson A23-683 - Original Drilling - APD - Rev 0	2,000.0	2,000.0	65.6	53.4	5.404	CC, ES
Larson A23-683 - Original Drilling - APD - Rev 0	17,466.4	17,320.2	975.2	573.6	2.428	SF
Larson Farms 01-24 - Original Drilling - Original Drilling -	7,500.0	6,871.1	819.0	755.0	12.793	SF
Larson Farms 01-24 - Original Drilling - Original Drilling -	7,575.9	6,870.3	815.5	752.0	12.850	CC, ES
Larson Farms 02-24 - Original Drilling - Original Drilling -	7,500.0	6,884.5	499.7	435.1	7.736	SF
Larson Farms 02-24 - Original Drilling - Original Drilling -	7,533.5	6,884.0	498.6	434.2	7.746	CC, ES
Larson Farms 03-24 - Original Drilling - Original Drilling -	8,864.7	6,798.6	1,784.3	1,710.2	24.099	CC
Larson Farms 03-24 - Original Drilling - Original Drilling -	8,900.0	6,798.4	1,784.6	1,710.1	23.928	ES
Larson Farms 03-24 - Original Drilling - Original Drilling -	9,300.0	6,797.0	1,836.6	1,757.1	23.099	SF
Larson Farms 04-24 - Original Drilling - Original Drilling -	7,575.1	7,223.7	1,794.6	1,702.9	19.572	CC, ES
Larson Farms 04-24 - Original Drilling - Original Drilling -	7,700.0	7,224.7	1,798.9	1,706.5	19.466	SF
Larson Farms 05-24 - Original Drilling - Original Drilling -	8,272.0	7,061.2	2,409.5	2,328.6	29.782	CC
Larson Farms 05-24 - Original Drilling - Original Drilling -	8,300.0	7,060.9	2,409.7	2,328.5	29.708	ES
Larson Farms 05-24 - Original Drilling - Original Drilling -	8,700.0	7,056.8	2,447.2	2,363.5	29.240	SF
Larson Farms 06-24 - Original Drilling - Original Drilling -	7,700.0	6,947.0	3,075.3	2,985.0	34.068	CC, ES
Larson Farms 06-24 - Original Drilling - Original Drilling -	9,300.0	9,300.0	3,455.7	3,350.0	32.698	SF
Larson Farms 07-24 - Original Drilling - Original Drilling -	8,878.2	7,120.5	3,111.7	3,033.7	39.901	CC
Larson Farms 07-24 - Original Drilling - Original Drilling -	8,900.0	7,120.2	3,111.8	3,033.6	39.802	ES
Larson Farms 07-24 - Original Drilling - Original Drilling -	9,900.0	7,105.3	3,275.2	3,188.1	37.636	SF
Peppler 24-32 - Original Drilling - Original Drilling - As Dr	11,687.8	6,703.7	1,587.7	1,477.7	14.427	CC
Peppler 24-32 - Original Drilling - Original Drilling - As Dr	11,700.0	6,703.1	1,587.8	1,477.5	14.394	ES
Peppler 24-32 - Original Drilling - Original Drilling - As Dr	12,000.0	6,690.1	1,618.1	1,503.2	14.083	SF
Roth 24-21 - Original Drilling - Original Drilling - As Drilled	10,246.0	6,672.9	746.4	662.4	8.887	CC, ES
Roth 24-21 - Original Drilling - Original Drilling - As Drilled	10,300.0	6,674.3	748.3	663.8	8.855	SF

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Larson A23-668
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 A23-668	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.79 sigma
Reference Wellbore	Original Drilling	**Database:**	EDM Producction
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
AA Section 19						
J&L Farms 31-19 - Original Drilling - Original Drilling - As	6,187.1	6,059.2	2,801.8	2,765.6	77.325	CC, ES
J&L Farms 31-19 - Original Drilling - Original Drilling - As	6,500.0	6,436.0	2,878.6	2,840.3	75.200	SF
J&L Farms 32-19 - Original Drilling - Original Drilling - As	6,284.7	6,222.4	2,675.3	2,639.7	75.084	CC, ES
J&L Farms 32-19 - Original Drilling - Original Drilling - As	6,500.0	6,464.9	2,710.7	2,674.0	73.877	SF
J&L Farms 41-19 - Original Drilling - Original Drilling - As	6,197.5	6,092.9	4,060.2	4,024.0	111.990	CC
J&L Farms 41-19 - Original Drilling - Original Drilling - As	6,200.0	6,095.9	4,060.2	4,023.9	111.943	ES
J&L Farms 41-19 - Original Drilling - Original Drilling - As	6,450.0	6,317.3	4,112.2	4,074.8	109.838	SF
J&L Farms 42-19 - Original Drilling - Original Drilling - As	6,239.6	6,047.6	4,416.7	4,381.1	124.242	CC, ES
J&L Farms 42-19 - Original Drilling - Original Drilling - As	6,550.0	6,308.3	4,495.6	4,458.7	121.768	SF
Larson USX AA19-03 - Original Drilling - Original Drilling	6,187.1	6,068.3	1,797.7	1,761.3	49.481	CC, ES
Larson USX AA19-03 - Original Drilling - Original Drilling	6,300.0	6,164.8	1,808.2	1,771.2	48.995	SF
Larson USX AA19-04 - Original Drilling - Original Drilling	5,689.6	5,573.1	738.3	704.9	22.129	CC
Larson USX AA19-04 - Original Drilling - Original Drilling	5,900.0	5,782.8	739.1	704.3	21.265	ES
Larson USX AA19-04 - Original Drilling - Original Drilling	6,200.0	6,076.9	748.7	712.1	20.432	SF
Larson USX AA19-05 - Original Drilling - Original Drilling	6,455.2	6,306.4	739.4	703.6	20.629	CC, ES
Larson USX AA19-05 - Original Drilling - Original Drilling	6,500.0	6,343.9	740.6	704.6	20.576	SF
Larson USX AA19-06 - Original Drilling - Original Drilling	6,260.5	6,112.2	1,529.8	1,494.5	43.250	CC, ES
Larson USX AA19-06 - Original Drilling - Original Drilling	6,400.0	6,246.3	1,545.3	1,509.2	42.830	SF
Thrall USX AA19-11 - Original Drilling - Original Drilling -	6,391.9	6,295.4	2,671.4	2,635.9	75.199	CC, ES
Thrall USX AA19-11 - Original Drilling - Original Drilling -	6,600.0	6,488.7	2,696.2	2,659.9	74.195	SF
Thrall USX AA19-12 - Original Drilling - Original Drilling -	6,756.0	6,546.6	1,717.6	1,680.3	46.105	CC, ES
Thrall USX AA19-12 - Original Drilling - Original Drilling -	6,950.0	6,637.4	1,734.1	1,696.3	45.866	SF
Thrall USX AA19-13 - Original Drilling - Original Drilling -	6,735.0	6,547.4	3,158.8	3,121.7	85.004	CC, ES
Thrall USX AA19-13 - Original Drilling - Original Drilling -	8,800.0	6,688.8	4,037.0	3,983.1	74.856	SF
Thrall USX AA19-14 - Original Drilling - Original Drilling -	6,487.1	6,300.0	3,686.7	3,650.7	102.251	CC, ES
Thrall USX AA19-14 - Original Drilling - Original Drilling -	8,800.0	8,800.0	4,925.9	4,868.3	85.605	SF
Thrall USX AA19-25 - Original Drilling - Original Drilling -	6,554.1	6,391.8	2,360.4	2,324.1	64.961	CC, ES
Thrall USX AA19-25 - Original Drilling - Original Drilling -	6,800.0	6,563.3	2,385.8	2,348.7	64.385	SF
Wells Ranch USX AA19-09 - Original Drilling - Original D	6,283.4	6,167.9	4,541.7	4,506.3	128.015	CC, ES
Wells Ranch USX AA19-09 - Original Drilling - Original D	6,600.0	6,462.7	4,617.2	4,580.3	125.254	SF
Wells Ranch USX AA19-10 - Original Drilling - Original D	6,310.1	6,192.0	3,398.1	3,362.8	96.253	CC, ES
Wells Ranch USX AA19-10 - Original Drilling - Original D	6,600.0	6,483.6	3,456.9	3,420.3	94.491	SF
Wells Ranch USX AA19-15 - Original Drilling - Original D	6,387.4	6,308.2	4,192.3	4,155.0	112.405	CC
Wells Ranch USX AA19-15 - Original Drilling - Original D	6,400.0	6,320.1	4,192.4	4,154.9	111.801	ES
Wells Ranch USX AA19-15 - Original Drilling - Original D	7,050.0	6,736.1	4,428.7	4,383.6	98.207	SF
Wells Ranch USX AA19-16 - Original Drilling - Original D	6,308.1	6,057.0	5,359.3	5,324.3	153.279	CC, ES
Wells Ranch USX AA19-16 - Original Drilling - Original D	6,700.0	6,362.2	5,459.9	5,423.5	149.646	SF
Wells Ranch USX AA19-23 - Original Drilling - Original D	6,335.4	6,300.0	4,398.0	4,362.4	123.541	CC, ES
Wells Ranch USX AA19-23 - Original Drilling - Original D	6,600.0	6,460.0	4,447.7	4,411.1	121.742	SF

Anticollision Summary Report

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Larson A23-668
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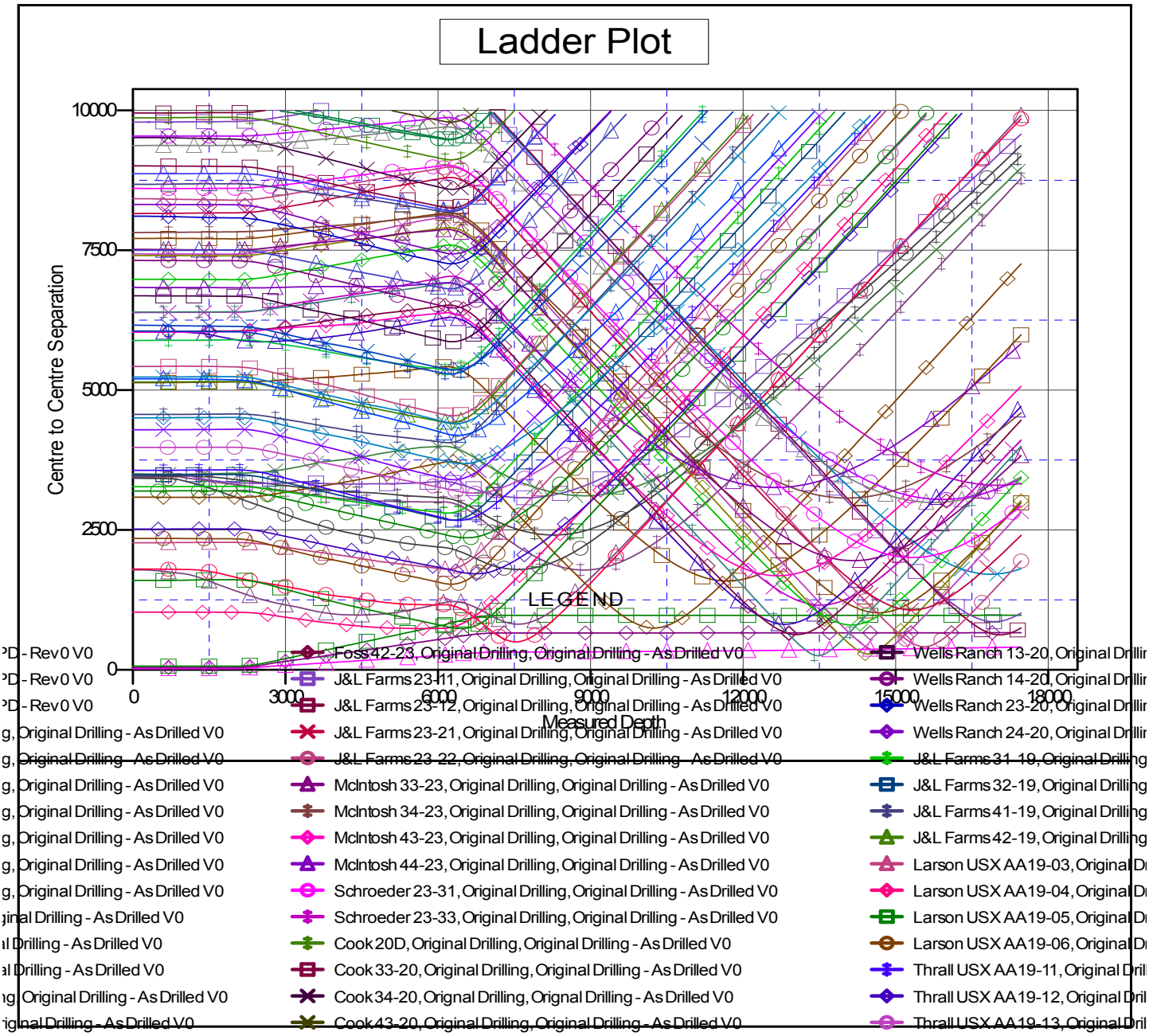
Summary

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
AA Section 20						
Cook 20D - Original Drilling - Original Drilling - As Drilled	6,255.3	6,089.0	9,116.3	9,080.8	256.963	CC, ES
Cook 20D - Original Drilling - Original Drilling - As Drilled	6,750.0	6,478.3	9,303.6	9,266.2	248.911	SF
Cook 33-20 - Original Drilling - Original Drilling - As Drille	6,255.7	6,117.1	8,255.6	8,220.1	232.377	CC, ES
Cook 33-20 - Original Drilling - Original Drilling - As Drille	6,700.0	6,474.5	8,409.1	8,371.9	225.666	SF
Cook 34-20 - Orignal Drilling - Orignal Drilling - As Drilled	6,278.8	6,200.0	8,589.6	8,553.5	238.042	CC, ES
Cook 34-20 - Orignal Drilling - Orignal Drilling - As Drilled	6,750.0	6,565.1	8,755.8	8,718.0	231.529	SF
Cook 43-20 - Original Drilling - Original Drilling - As Drille	6,249.5	6,091.9	9,791.3	9,755.7	275.167	CC
Cook 43-20 - Original Drilling - Original Drilling - As Drille	6,250.0	6,092.4	9,791.3	9,755.7	275.145	ES
Cook 43-20 - Original Drilling - Original Drilling - As Drille	6,700.0	6,444.0	9,949.9	9,912.6	266.811	SF
Cook 44-20 - Original Drilling - Original Drilling - As Drille						Out of range
J&L Farms 01-20 - Original Drilling - Original Drilling - As	6,214.3	6,103.4	9,474.9	9,436.1	244.205	CC, ES
J&L Farms 01-20 - Original Drilling - Original Drilling - As	6,600.0	6,319.5	9,596.6	9,556.3	238.429	SF
J&L Farms 02-20 - Original Drilling - Original Drilling - As	6,213.3	6,107.6	8,183.2	8,146.7	224.144	CC, ES
J&L Farms 02-20 - Original Drilling - Original Drilling - As	6,650.0	6,479.1	8,335.5	8,297.2	217.709	SF
J&L Farms 08-20 - Original Drilling - Original Drilling - As	6,233.2	6,125.7	9,488.4	9,296.4	49.424	CC
J&L Farms 08-20 - Original Drilling - Original Drilling - As	6,250.0	6,142.1	9,488.6	9,296.2	49.294	ES
J&L Farms 08-20 - Original Drilling - Original Drilling - As	6,800.0	6,597.7	9,736.8	9,530.6	47.236	SF
J&L Farms 11-20 - Original Drilling - Original Drilling - As	6,179.8	5,853.4	5,365.7	5,330.1	150.713	CC, ES
J&L Farms 11-20 - Original Drilling - Original Drilling - As	6,550.0	6,520.5	5,464.1	5,426.0	143.715	SF
J&L Farms 12-20 - Original Drilling - Original Drilling - As	6,241.7	6,105.4	5,288.6	5,252.5	146.580	CC, ES
J&L Farms 12-20 - Original Drilling - Original Drilling - As	6,550.0	6,401.3	5,365.4	5,328.0	143.338	SF
J&L Farms 22-20 - Original Drilling - Original Drilling - As	6,235.2	6,103.5	6,811.1	6,775.3	190.274	CC, ES
J&L Farms 22-20 - Original Drilling - Original Drilling - As	6,600.0	6,412.9	6,918.8	6,881.4	185.363	SF
J&L Farms 32-20 - Original Drilling - Original Drilling - As	6,243.4	6,254.5	8,207.8	8,171.6	226.852	CC, ES
J&L Farms 32-20 - Original Drilling - Original Drilling - As	6,600.0	6,476.1	8,312.5	8,275.0	221.795	SF
Wells Ranch 13-20 - Original Drilling - Original Drilling - A	6,276.6	6,183.7	5,865.3	5,829.7	164.833	CC, ES
Wells Ranch 13-20 - Original Drilling - Original Drilling - A	6,600.0	6,479.4	5,945.6	5,908.6	160.696	SF
Wells Ranch 14-20 - Original Drilling - Original Drilling - A	6,310.7	6,235.4	6,469.4	6,434.0	182.723	CC, ES
Wells Ranch 14-20 - Original Drilling - Original Drilling - A	6,800.0	6,556.4	6,636.0	6,598.9	178.745	SF
Wells Ranch 23-20 - Original Drilling - Original Drilling - A	6,260.6	6,104.5	7,259.4	7,223.6	202.946	CC, ES
Wells Ranch 23-20 - Original Drilling - Original Drilling - A	6,650.0	6,378.1	7,378.8	7,341.6	198.433	SF
Wells Ranch 24-20 - Original Drilling - Original Drilling - A	6,288.1	6,132.2	7,435.0	7,399.7	210.108	CC, ES
Wells Ranch 24-20 - Original Drilling - Original Drilling - A	6,750.0	6,478.6	7,589.6	7,552.5	204.694	SF

Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Larson A23-668
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 A23-668	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.79 sigma
Reference Wellbore	Original Drilling	**Database:**	EDM Producction
Reference Design:	APD - Rev 0	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4682.0ft (Original Well Elev.	Coordinates are relative to: Larson A23-668
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.5000000	Grid Convergence at Surface is: 0.65°



Company:	Northern Region - DJ Basin	**Local Co-ordinate Reference:**	Well Larson A23-668
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 A23-668	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.79 sigma
Reference Wellbore	Original Drilling	**Database:**	EDM Producction
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 A23-668
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.65°