

VERDAD RESOURCES

**WATTENBERG FIELD
8N-60W-14 SCHNEIDER 1414 PAD
SCHNEIDER 1414-03H**

**Plan C
Design #1**

Anticollision Summary Report

09 March, 2021

HP

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well SCHNEIDER 1414-03H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4963.00usft (RIG)
Reference Site:	8N-60W-14 SCHNEIDER 1414 PAD	MD Reference:	RKB = 20' @ 4963.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	SCHNEIDER 1414-03H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan C	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1		
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 centre distance of 1,500.00usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.45 Sigma	Casing Method:	Added to Error Values

Survey Tool Program		Date	3/9/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	1,700.00	Design #1 (Plan C)	ISCWSA MWD	Fixed:v2:standard declination	
1,700.00	11,747.20	Design #1 (Plan C)	ISCWSA MWD	Fixed:v2:standard declination	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
8N-60W-11 SONIC STAR 1101 PAD						
SONIC STAR 1101-01H - Plan B - Design #2						Out of range
SONIC STAR 1101-03H - Plan B - Design #2						Out of range
SONIC STAR 1101-05H - Plan B - Design #2						Out of range
SONIC STAR 1101-07H - Plan B - Design #2						Out of range
SONIC STAR 1101-09H - Plan B - Design #2						Out of range
SONIC STAR 1101-11H - Plan B - Design #2						Out of range
SONIC STAR 1101-13H - Plan B - Design #2						Out of range
SONIC STAR 1101-16H - Plan B - Design #2						Out of range
8N-60W-12 Offsets						
COLORADO NATIONAL BANK #1 - Shell P&A Well - No						Out of range
8N-60W-14 Offsets						
BOOMSLANG FED 8-60 14A-13-18-1 - Bison Planned W	7,231.42	5,836.41	1,253.99	1,201.05	23.687	CC, ES
BOOMSLANG FED 8-60 14A-13-18-1 - Bison Planned W	8,000.00	5,800.00	1,470.99	1,396.87	19.848	SF
BOOMSLANG FED 8-60 14A-13-18-2 - Bison PR Well - A	7,009.39	5,824.82	1,190.60	1,148.42	28.226	CC, ES
BOOMSLANG FED 8-60 14A-13-18-2 - Bison PR Well - A	7,900.00	5,858.00	1,457.87	1,388.36	20.973	SF
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well - A	7,680.41	5,829.23	1,173.03	1,127.86	25.969	CC
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well - A	7,700.00	5,828.62	1,173.19	1,127.39	25.613	ES
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well - A	8,500.00	5,806.81	1,430.58	1,353.06	18.454	SF
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well - A	8,356.96	5,763.00	1,156.96	1,100.89	20.634	CC
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well - A	8,400.00	5,763.00	1,157.76	1,099.61	19.909	ES
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well - A	9,000.00	5,763.00	1,323.66	1,239.06	15.647	SF
BOOMSLANG FED 8-60 14A-13-18-5 - Bison PR Well - A	8,858.30	5,827.26	1,135.94	1,064.21	15.836	CC
BOOMSLANG FED 8-60 14A-13-18-5 - Bison PR Well - A	8,900.00	5,858.00	1,137.66	1,063.69	15.379	ES
BOOMSLANG FED 8-60 14A-13-18-5 - Bison PR Well - A	9,400.00	5,858.00	1,257.15	1,160.06	12.948	SF
BOOMSLANG FED 8-60 14A-13-18-6 - Bison Planned W	9,336.77	5,900.00	1,242.36	1,145.68	12.850	CC
BOOMSLANG FED 8-60 14A-13-18-6 - Bison Planned W	9,400.00	5,900.00	1,243.97	1,143.44	12.374	ES
BOOMSLANG FED 8-60 14A-13-18-6 - Bison Planned W	9,800.00	5,900.00	1,325.91	1,205.53	11.015	SF
BOOMSLANG FED 8-60 14B-13-18-1 - Bison Planned W	9,552.93	5,863.48	1,241.97	1,144.94	12.799	CC
BOOMSLANG FED 8-60 14B-13-18-1 - Bison Planned W	9,600.00	5,863.41	1,242.86	1,143.47	12.505	ES
BOOMSLANG FED 8-60 14B-13-18-1 - Bison Planned W	10,000.00	5,862.79	1,319.99	1,204.68	11.448	SF
BOOMSLANG FED 8-60 14B-13-18-2 - Bison PR Well - A	9,779.60	5,853.00	1,152.69	1,062.08	12.722	CC
BOOMSLANG FED 8-60 14B-13-18-2 - Bison PR Well - A	9,800.00	5,853.00	1,152.87	1,061.08	12.561	ES
BOOMSLANG FED 8-60 14B-13-18-2 - Bison PR Well - A	10,200.00	5,853.00	1,226.96	1,116.22	11.080	SF

HP

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Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4963.00usft (RIG)
Reference Site:	8N-60W-14 SCHNEIDER 1414 PAD	MD Reference:	RKB = 20' @ 4963.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	SCHNEIDER 1414-03H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan C	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
8N-60W-14 Offsets						
BOOMSLANG FED 8-60 14B-13-18-3 - Bison PR Well - A	10,410.14	5,757.00	1,172.81	1,071.50	11.575	CC
BOOMSLANG FED 8-60 14B-13-18-3 - Bison PR Well - A	10,500.00	5,721.20	1,174.10	1,068.31	11.099	ES
BOOMSLANG FED 8-60 14B-13-18-3 - Bison PR Well - A	10,800.00	5,712.46	1,232.72	1,113.61	10.350	SF
BOOMSLANG FED 8-60 14B-13-18-4 - Bison PR Well - A	10,946.09	5,786.39	1,146.82	1,033.47	10.117	CC
BOOMSLANG FED 8-60 14B-13-18-4 - Bison PR Well - A	11,000.00	5,788.36	1,148.08	1,031.51	9.848	ES
BOOMSLANG FED 8-60 14B-13-18-4 - Bison PR Well - A	11,300.00	5,798.65	1,200.02	1,069.36	9.184	SF
BOOMSLANG FED 8-60 14B-13-18-5 - Bison PR Well - A	11,602.21	5,849.00	1,144.49	1,007.90	8.379	CC
BOOMSLANG FED 8-60 14B-13-18-5 - Bison PR Well - A	11,700.00	5,849.00	1,148.66	1,006.34	8.071	ES
BOOMSLANG FED 8-60 14B-13-18-5 - Bison PR Well - A	11,747.20	5,849.00	1,153.63	1,008.87	7.969	SF
BOOMSLANG FED 8-60 14B-13-18-6 - Bison Planned W	11,459.64	5,800.00	1,250.15	1,118.38	9.488	CC
BOOMSLANG FED 8-60 14B-13-18-6 - Bison Planned W	11,500.00	5,800.00	1,250.80	1,116.67	9.325	ES
BOOMSLANG FED 8-60 14B-13-18-6 - Bison Planned W	11,747.20	5,800.00	1,282.79	1,136.83	8.789	SF
HNIZDIL 1-14 - Gemini D/A Well - No Surveys	11,300.00	6,067.00	519.97	196.44	1.607	ES, SF
HNIZDIL 1-14 - Gemini D/A Well - No Surveys	11,349.28	6,067.00	517.63	196.90	1.614	CC
SCHNEIDER 1-14-8-60 - Verdad PR Well - Actual Precis	0.00	0.00	67.55			
SCHNEIDER 2-14-8-60 - Verdad PR Well - Actual Precis	219.50	218.50	52.55	41.72	4.855	CC
SCHNEIDER 2-14-8-60 - Verdad PR Well - Actual Precis	300.00	298.99	53.64	40.20	3.991	ES
SCHNEIDER 2-14-8-60 - Verdad PR Well - Actual Precis	600.00	597.88	77.20	53.23	3.221	SF
8N-60W-14 SCHNEIDER 1414 PAD						
SCHNEIDER 1414-01H - Plan C - Design #1	219.50	219.50	32.01	24.43	4.222	CC, ES, SF
SCHNEIDER 1414-02H - Plan C - Design #1	219.50	219.50	16.01	8.42	2.111	CC, ES, SF
SCHNEIDER 1414-04H - Plan C - Design #1	200.00	200.00	16.01	8.44	2.115	CC, ES
SCHNEIDER 1414-04H - Plan C - Design #1	1,600.00	1,590.42	31.96	15.37	1.926	SF
8N-60W-22 Offsets Incomplete						
HALE 8-60 22-23-1 - Bison Plan - Now PR - No COGCC	11,700.00	14,500.50	1,487.49	1,244.32	6.117	SF
HALE 8-60 22-23-1 - Bison Plan - Now PR - No COGCC	11,747.20	14,500.50	1,465.04	1,226.96	6.154	CC, ES
8N-60W-26 Offsets Incomplete						
EWS 1B - Expedition Water Solutions Planned Well - Pla						Out of range
8N-60W-36 Offsets Incomplete						
*STATE C #1 (No GL on COGCC) - Williamson P&A Well						Out of range
STATE #1 - Chicago D/A Well - No Surveys						Out of range

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Reference Site:	8N-60W-14 SCHNEIDER 1414 PAD	MD Reference:	RKB = 20' @ 4963.00usft (RIG)
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Reference Well:	SCHNEIDER 1414-03H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan C	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)		Separation Factor	Warning
Offset Well - Wellbore - Design				Between Ellipses (usft)		
9N-60W-35 Offsets Incomplete						
PINTAIL FED 2-11-1HN - Mallard Planned Well - Planned						Out of range
PINTAIL FED 2-11-2HN - Mallard Planned Well - Planned						Out of range
PINTAIL FED 2-11-3HC - Mallard Planned Well - Planned						Out of range
PINTAIL FED 2-11-4HN - Mallard Planned Well - Planned						Out of range
PINTAIL FED 2-11-5HN - Mallard Planned Well - Planned	6,153.97	16,749.30	1,464.38	1,206.38	5.676	CC
PINTAIL FED 2-11-5HN - Mallard Planned Well - Planned	6,250.00	16,773.40	1,467.32	1,203.46	5.561	ES
PINTAIL FED 2-11-5HN - Mallard Planned Well - Planned	6,400.00	16,810.49	1,482.22	1,211.73	5.480	SF
PINTAIL FED 2-11-6HN - Mallard Planned Well - Planned	6,428.79	17,006.97	852.03	597.58	3.348	CC
PINTAIL FED 2-11-6HN - Mallard Planned Well - Planned	6,450.00	17,006.97	852.33	596.45	3.331	ES
PINTAIL FED 2-11-6HN - Mallard Planned Well - Planned	6,500.00	17,006.97	855.33	596.91	3.310	SF
PINTAIL FED 2-11-7HN - Mallard Planned Well - Planned	6,587.86	17,255.29	373.33	222.85	2.481	CC
PINTAIL FED 2-11-7HN - Mallard Planned Well - Planned	6,600.00	17,255.29	373.62	222.62	2.474	ES, SF
PINTAIL FED 2-11-8HN - Mallard Planned Well - Planned	6,681.79	17,549.49	624.28	359.70	2.360	CC
PINTAIL FED 2-11-8HN - Mallard Planned Well - Planned	6,700.00	17,549.49	624.76	358.83	2.349	ES
PINTAIL FED 2-11-8HN - Mallard Planned Well - Planned	6,750.00	17,549.49	630.94	362.36	2.349	SF
PINTAIL FED 2-11-9HN - Mallard Planned Well - Planned	6,752.50	17,926.13	1,233.19	950.17	4.357	CC
PINTAIL FED 2-11-9HN - Mallard Planned Well - Planned	6,800.00	17,926.13	1,235.26	949.50	4.323	ES
PINTAIL FED 2-11-9HN - Mallard Planned Well - Planned	6,850.00	17,926.13	1,241.85	953.49	4.307	SF
PINTAIL FED 3-15-9HN - Mallard Planned Well - Planned						Out of range
Shull 1-35-9-60 - Carrizo PR Well - Actual Precision Surv						Out of range
Shull 2-35-9-60 - Verdad PR Well - Actual Precision Surv						Out of range
Shull 3-35-9-60 - Verdad PR Well - Actual Precision Surv						Out of range

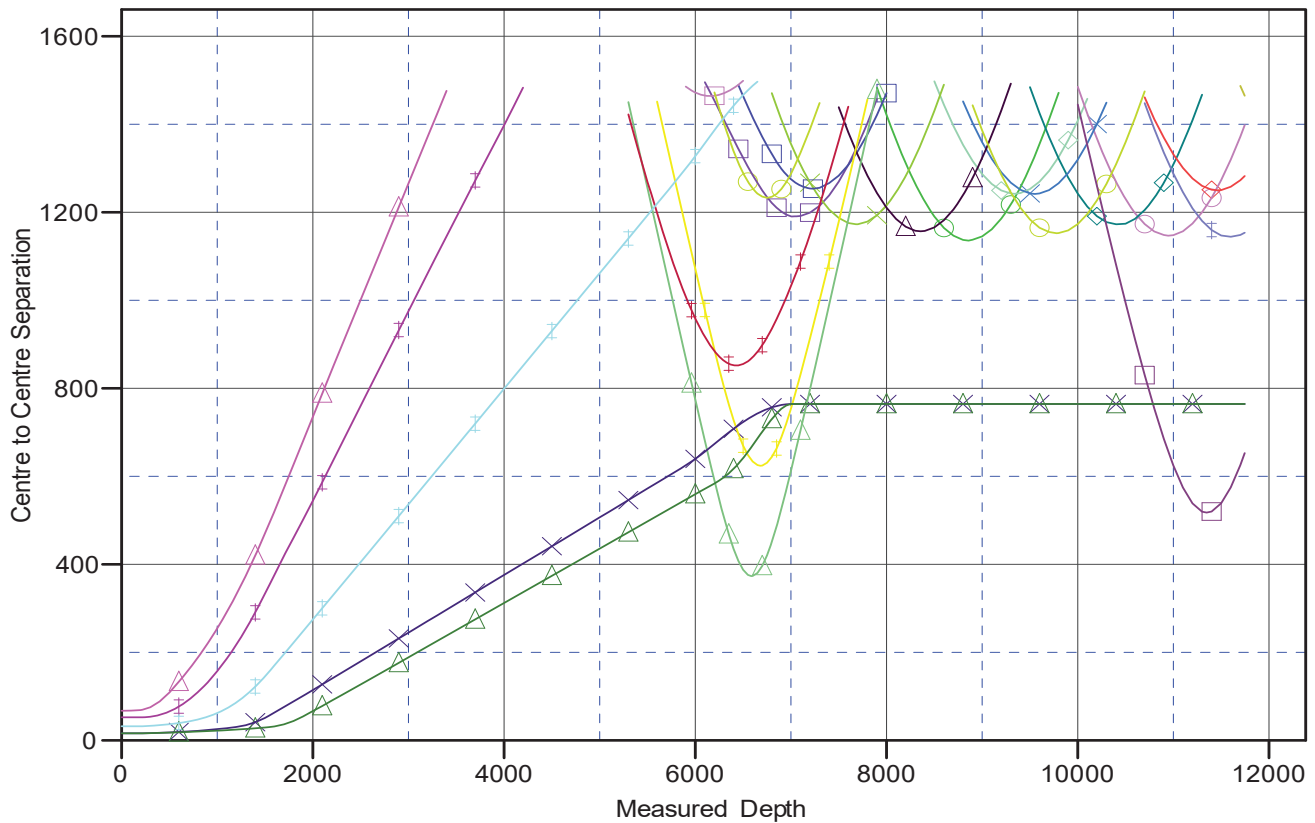
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Anticollision Summary Report

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Reference Well:	SCHNEIDER 1414-03H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan C	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 4963.00usft (RIG)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: SCHNEIDER 1414-03H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.93°

Ladder Plot



LEGEND

BOOMSLANG FED 8-60 14A-13-182, Bison PR Well, Actual Baker Surveys V0	BOOMSLANG FED 8-60 14A-13-181, Bison Planned Well, Planned Bison MWD Surveys V0	PINTAIL FED 2-11-84N, Mallard Planned Well, Planned Mallard Surveys V0
BOOMSLANG FED 8-60 14A-13-185, Bison PR Well, Actual Baker Surveys V0	BOOMSLANG FED 8-60 14B-13-186, Bison Planned Well, Planned MWD Surveys V0	PINTAIL FED 2-11-84N, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLANG FED 8-60 14A-13-186, Bison Planned Well, Planned MWD Surveys V0	BOOMSLANG FED 8-60 14B-13-181, Bison Planned Well, Planned MWD Surveys V0	PINTAIL FED 2-11-84N, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLANG FED 8-60 14A-13-183, Bison PR Well, Actual Baker Surveys V0	BOOMSLANG FED 8-60 14A-13-184, Bison PR Well, Actual Baker Surveys V0	PINTAIL FED 2-11-84N, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLANG FED 8-60 14B-13-184, Bison PR Well, Actual Baker Surveys V0	SCHNEIDER 2-14-8-60, Verdard PR Well, Actual Precision Surveys (Grid to True) V0	SCHNEIDER 1414-02H, Plan C, Design #1 V0
SCHNEIDER 1-14-8-60, Verdard PR Well, Actual Precision Surveys (Grid to True) V0	HNIZDIL 144, Gemini D/A Well, No Surveys V0	SCHNEIDER 1414-01H, Plan C, Design #1 V0
BOOMSLANG FED 8-60 14B-13-183, Bison PR Well, Actual Baker Surveys V0	BOOMSLANG FED 8-60 14B-13-182, Bison PR Well, Actual Baker Surveys V0	SCHNEIDER 1414-04H, Plan C, Design #1 V0
BOOMSLANG FED 8-60 14B-13-185, Bison PR Well, Actual Baker Surveys V0	PINTAIL FED 2-11-74N, Mallard Planned Well, Planned MWD Surveys V0	HALE 8-6022-23-1, Bison Plan - New PR - No COGOC Actual Surveys, Planned MWD Surveys V0

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well SCHNEIDER 1414-03H
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Site Error:	0.00 usft	North Reference:	True
Reference Well:	SCHNEIDER 1414-03H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan C	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 4963.00usft (RIG)

Offset Depths are relative to Offset Datum

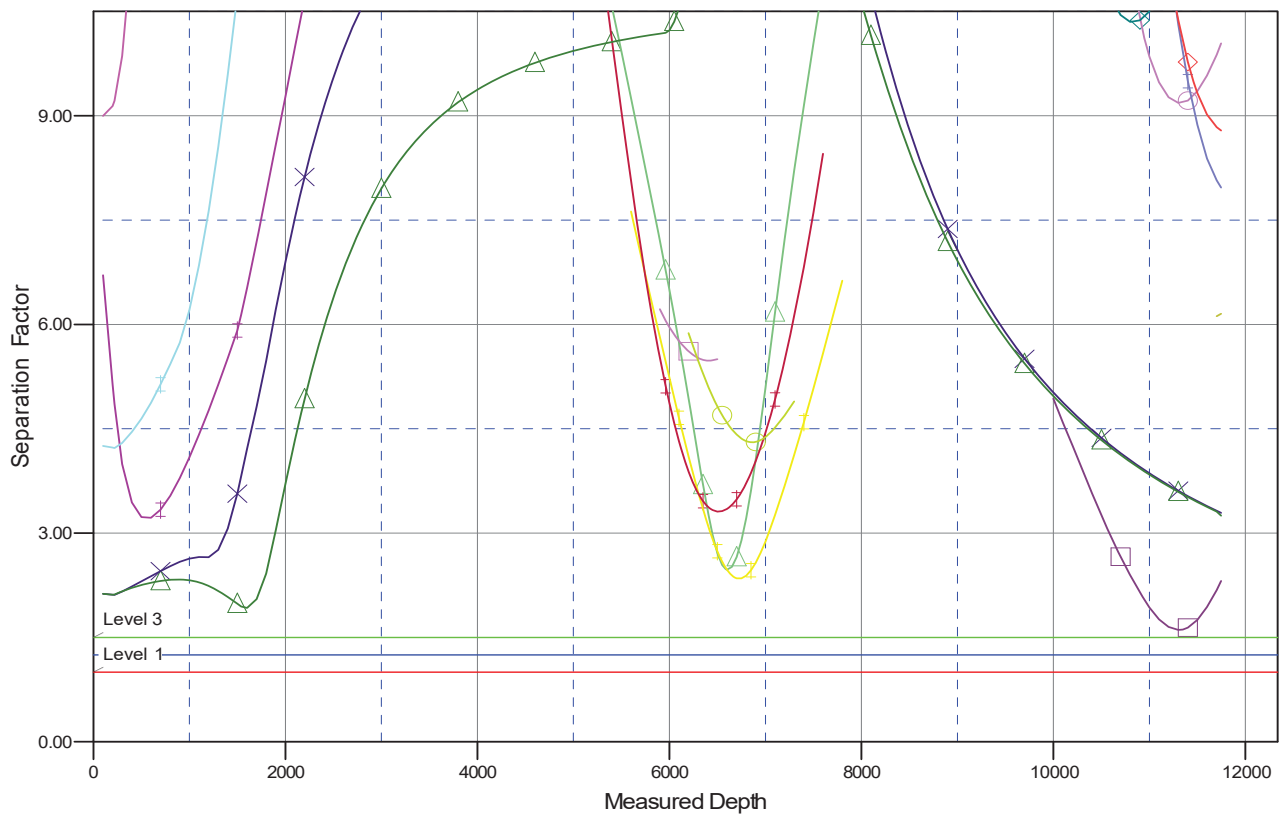
Central Meridian is -105.500000

Coordinates are relative to: SCHNEIDER 1414-03H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.93°

Separation Factor Plot



LEGEND

BOOMSLANG FED 8-60 14A-13-182, Bison PR Well, Actual Baker Surveys V0	BOOMSLANG FED 8-60 14A-13-181, Bison Planned Well, Planned Bison MWD Surveys V0	PINTAIL FED 2-11-8H-N, Mallard Planned Well, Planned Mallard Surveys V0
BOOMSLANG FED 8-60 14A-13-185, Bison PR Well, Actual Baker Surveys V0	BOOMSLANG FED 8-60 14B-13-186, Bison Planned Well, Planned MWD Surveys V0	PINTAIL FED 2-11-8H-N, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLANG FED 8-60 14A-13-186, Bison Planned Well, Planned MWD Surveys V0	BOOMSLANG FED 8-60 14B-13-181, Bison Planned Well, Planned MWD Surveys V0	PINTAIL FED 2-11-8H-N, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLANG FED 8-60 14A-13-183, Bison PR Well, Actual Baker Surveys V0	BOOMSLANG FED 8-60 14A-13-184, Bison PR Well, Actual Baker Surveys V0	PINTAIL FED 2-11-8H-N, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLANG FED 8-60 14B-13-184, Bison PR Well, Actual Baker Surveys V0	SCHNEIDER 2-14-8-60, Verdard PR Well, Actual Precision Surveys (Grid to True) V0	SCHNEIDER 1414-02H, Plan C, Design #1 V0
SCHNEIDER 1-14-8-60, Verdard PR Well, Actual Precision Surveys (Grid to True) V0	HNIZDIL 144, Gemini D/A Well, No Surveys V0	SCHNEIDER 1414-01H, Plan C, Design #1 V0
BOOMSLANG FED 8-60 14B-13-183, Bison PR Well, Actual Baker Surveys V0	BOOMSLANG FED 8-60 14B-13-182, Bison PR Well, Actual Baker Surveys V0	SCHNEIDER 1414-04H, Plan C, Design #1 V0
BOOMSLANG FED 8-60 14B-13-185, Bison PR Well, Actual Baker Surveys V0	PINTAIL FED 2-11-7H-N, Mallard Planned Well, Planned MWD Surveys V0	HALE 8-60-22-23-1, Bison Plan - New PR - No COGOC Actual Surveys, Planned MWD Surveys V0