

VERDAD RESOURCES

**WATTENBERG FIELD
8N-60W-14 SCHNEIDER 1414 PAD
SCHNEIDER 1414-02H**

**Plan C
Design #1**

Anticollision Summary Report

09 March, 2021

HP

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well SCHNEIDER 1414-02H
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 1414-02H	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	11,471.63	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						Out of range
BOOMSLANG FED 8-60 14A-13-18-2 - Bison PR Well - A						Out of range
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well - A						Out of range
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well - A						Out of range
BOOMSLANG FED 8-60 14A-13-18-5 - Bison PR Well - A						Out of range
BOOMSLANG FED 8-60 14A-13-18-6 - Bison Planned W						Out of range
BOOMSLANG FED 8-60 14B-13-18-1 - Bison Planned W						Out of range
BOOMSLANG FED 8-60 14B-13-18-2 - Bison PR Well - A						Out of range
BOOMSLANG FED 8-60 14B-13-18-3 - Bison PR Well - A						Out of range
BOOMSLANG FED 8-60 14B-13-18-4 - Bison PR Well - A						Out of range
BOOMSLANG FED 8-60 14B-13-18-5 - Bison PR Well - A						Out of range
BOOMSLANG FED 8-60 14B-13-18-6 - Bison Planned W						Out of range
HNIZDIL 1-14 - Gemini D/A Well - No Surveys	11,055.32	6,067.00	246.91	-73.40	0.771	Level 1, CC, SF
HNIZDIL 1-14 - Gemini D/A Well - No Surveys	11,100.00	6,067.00	250.92	-74.41	0.771	Level 1, ES
SCHNEIDER 1-14-8-60 - Verdad PR Well - Actual Preci	0.00	0.00	51.55			
SCHNEIDER 2-14-8-60 - Verdad PR Well - Actual Preci	241.00	240.00	36.54	25.04	3.177	CC
SCHNEIDER 2-14-8-60 - Verdad PR Well - Actual Preci	300.00	299.00	37.11	23.67	2.761	ES
SCHNEIDER 2-14-8-60 - Verdad PR Well - Actual Preci	500.00	498.65	47.65	27.26	2.336	SF

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Reference Well:	SCHNEIDER 1414-02H	Survey Calculation Method:	Minimum Curvature
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Reference Wellbore	Plan C	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
8N-60W-14 SCHNEIDER 1414 PAD						
SCHNEIDER 1414-01H - Plan C - Design #1	241.00	241.00	16.01	8.41	2.106	CC, ES, SF
SCHNEIDER 1414-03H - Plan C - Design #1	204.07	204.07	16.01	8.44	2.114	CC, ES, SF
SCHNEIDER 1414-04H - Plan C - Design #1	200.00	200.00	32.01	24.44	4.230	CC, ES, SF
8N-60W-22 Offsets Incomplete						
HALE 8-60 22-23-1 - Bison Plan - Now PR - No COGCC	11,471.93	14,500.50	879.26	590.03	3.040	CC, ES, SF
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
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	6,110.95	16,704.43	1,426.49	1,162.76	5.409	CC
PINTAIL FED 2-11-4HN - Mallard Planned Well - Planned	6,150.00	16,704.43	1,427.05	1,161.95	5.383	ES
PINTAIL FED 2-11-4HN - Mallard Planned Well - Planned	6,250.00	16,704.43	1,433.49	1,166.07	5.360	SF
PINTAIL FED 2-11-5HN - Mallard Planned Well - Planned	6,244.37	16,810.49	809.62	559.31	3.234	CC
PINTAIL FED 2-11-5HN - Mallard Planned Well - Planned	6,250.00	16,810.49	809.65	559.10	3.232	ES
PINTAIL FED 2-11-5HN - Mallard Planned Well - Planned	6,300.00	16,810.49	812.02	560.07	3.223	SF
PINTAIL FED 2-11-6HN - Mallard Planned Well - Planned	6,300.00	17,006.97	361.15	243.89	3.080	SF
PINTAIL FED 2-11-6HN - Mallard Planned Well - Planned	6,338.03	17,006.97	358.10	241.98	3.084	CC, ES
PINTAIL FED 2-11-7HN - Mallard Planned Well - Planned	6,402.44	17,255.29	701.43	446.76	2.754	CC, ES
PINTAIL FED 2-11-7HN - Mallard Planned Well - Planned	6,450.00	17,255.29	704.31	448.26	2.751	SF
PINTAIL FED 2-11-8HN - Mallard Planned Well - Planned	6,446.63	17,549.49	1,317.16	1,041.10	4.771	CC
PINTAIL FED 2-11-8HN - Mallard Planned Well - Planned	6,450.00	17,549.49	1,317.17	1,041.00	4.769	ES
PINTAIL FED 2-11-8HN - Mallard Planned Well - Planned	6,550.00	17,549.49	1,325.49	1,046.42	4.750	SF
PINTAIL FED 2-11-9HN - Mallard Planned Well - Planned						Out of range
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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Reference Depths are relative to RKB = 20' @ 4963.00usft (RIG)

Offset Depths are relative to Offset Datum

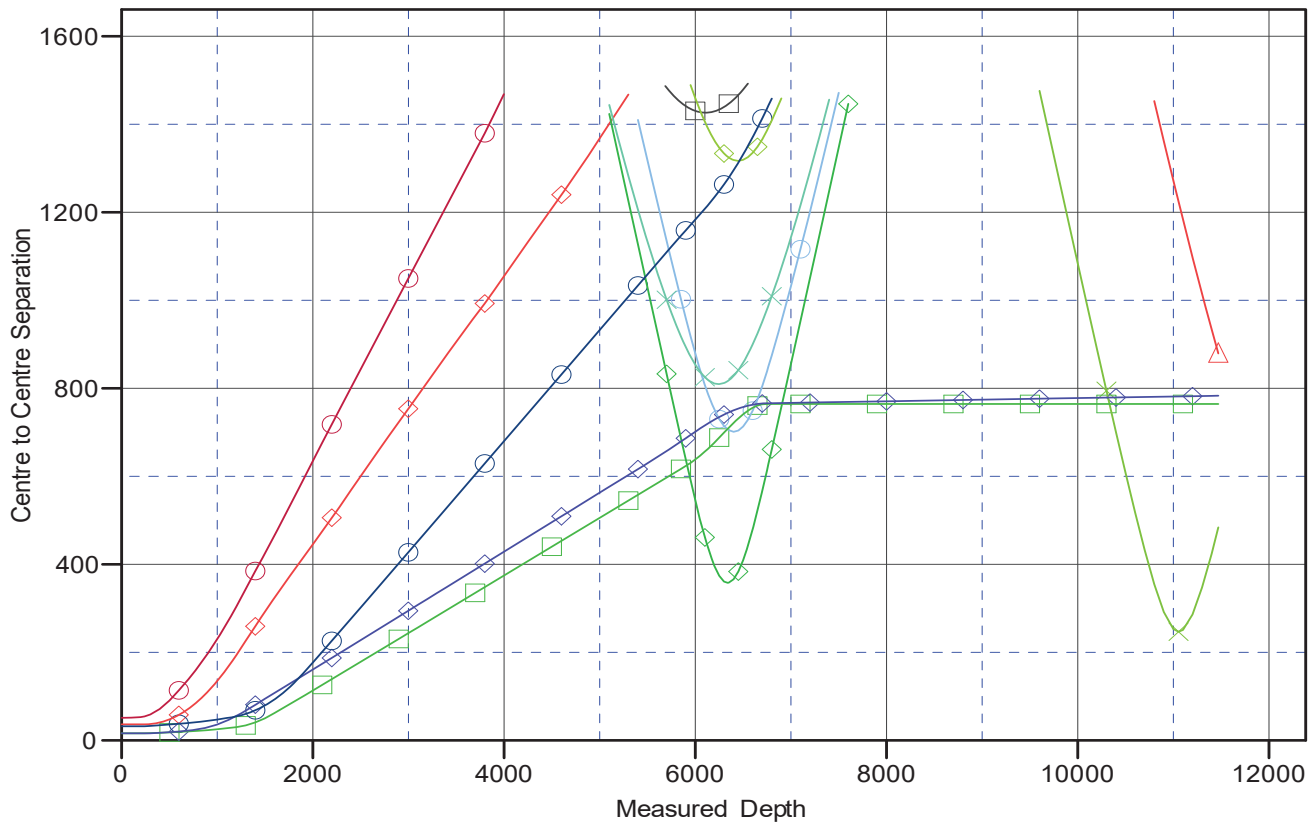
Central Meridian is -105.500000

Coordinates are relative to: SCHNEIDER 1414-02H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.93°

Ladder Plot



LEGEND

SCHNEIDER 1-14-8-60, Verdad PR Well, Actual Precision Surveys (Grid to True) V0	PINTAIL FED 2-11-4-HN, Mallard Planned Well, Planned MWD Surveys V0	SCHNEIDER 1414-09H, Plan C, Design #1 V0
SCHNEIDER 2-14-8-60, Verdad PR Well, Actual Precision Surveys (Grid to True) V0	PINTAIL FED 2-11-5-HN, Mallard Planned Well, Planned MWD Surveys V0	SCHNEIDER 1414-01H, Plan C, Design #1 V0
HNZDIL 144, Gemini D/A Well, No Surveys V0	PINTAIL FED 2-11-6-HN, Mallard Planned Well, Planned MWD Surveys V0	SCHNEIDER 1414-04H, Plan C, Design #1 V0
PINTAIL FED 2-11-7-HN, Mallard Planned Well, Planned MWD Surveys V0	PINTAIL FED 2-11-9-HN, Mallard Planned Well, Planned MWD Surveys V0	HALE 8-6022-23-1, Bison Plan - Nbw PR - No COGCC Actual Surveys, Planned MWD Surveys V0

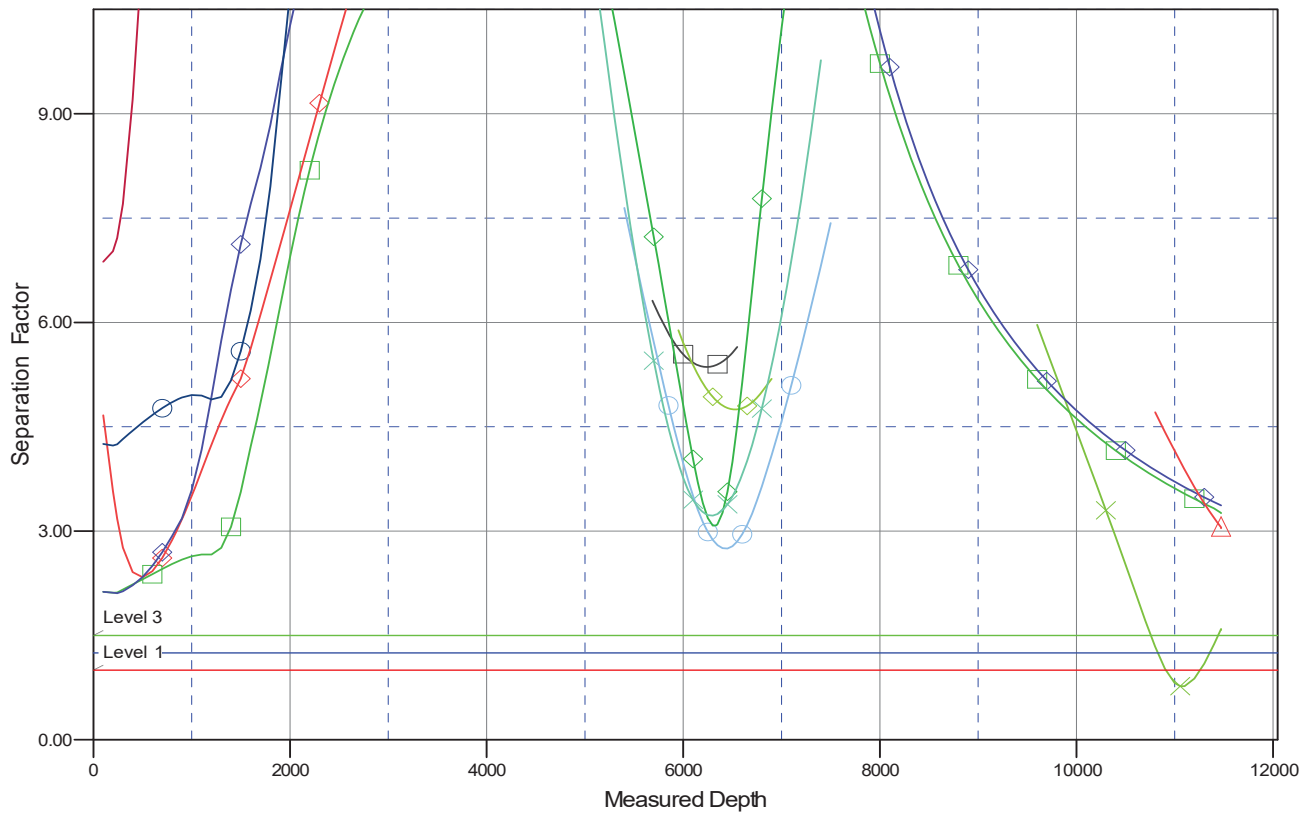
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Reference Depths are relative to RKB = 20' @ 4963.00usft (RIG)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: SCHNEIDER 1414-02H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.93°

Separation Factor Plot



LEGEND

SCHNEIDER 1-14-8-60, Verdad PR Well, Actual Precision Surveys (Grid to True) V0	PINTAIL FED 2-11-4-RN, Mallard Planned Well, Planned MWD Surveys V0	SCHNEIDER 1414-03H, Plan C, Design #1 V0
SCHNEIDER 2-14-8-60, Verdad PR Well, Actual Precision Surveys (Grid to True) V0	PINTAIL FED 2-11-8-RN, Mallard Planned Well, Planned MWD Surveys V0	SCHNEIDER 1414-01H, Plan C, Design #1 V0
HNZDIL 144, Gemini D/A Well, No Surveys V0	PINTAIL FED 2-11-8-RN, Mallard Planned Well, Planned MWD Surveys V0	SCHNEIDER 1414-04H, Plan C, Design #1 V0
PINTAIL FED 2-11-7-RN, Mallard Planned Well, Planned MWD Surveys V0	PINTAIL FED 2-11-9-RN, Mallard Planned Well, Planned MWD Surveys V0	HALE 8-6022-23-1, Bison Plan - New PR - No COGCC Actual Surveys, Planned MWD Surveys V0