

VERDAD RESOURCES

WATTENBERG FIELD

9N-60W-25 PEGGY 2501 PAD

PEGGY 2501-16H

Plan B

Design #1

Anticollision Summary Report

08 October, 2021

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well PEGGY 2501-16H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 16' @ 4908.00usft (RIG)
Reference Site:	9N-60W-25 PEGGY 2501 PAD	MD Reference:	RKB = 16' @ 4908.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	PEGGY 2501-16H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan B	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	10/8/2021			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	1,590.00	Design #1 (Plan B)	ISCWSA MWD	Fixed:v2:standard declination	
1,590.00	14,772.67	Design #1 (Plan B)	ISCWSA MWD	Fixed:v2:standard declination	

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
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	14,772.67	15,183.77	1,412.00	1,030.47	3.701	CC, ES, SF
SONIC STAR 1101-11H - Plan B - Design #2	14,772.67	15,571.19	750.84	371.08	1.977	CC, ES, SF
SONIC STAR 1101-13H - Plan B - Design #2	14,772.67	16,147.31	234.77	5.88	1.026	Level 2, CC, ES, SF
SONIC STAR 1101-16H - Plan B - Design #2	12,389.16	18,864.15	512.21	127.78	1.332	Level 3, CC, ES, SF
9N-59W-30 MARTIN FED PAD						
MARTIN 3030 01H - Plan B - Design #1						Out of range
MARTIN 3030 02H - Plan B - Design #1						Out of range
MARTIN 3030 03H - Plan B - Design #1						Out of range
MARTIN 3030 04H - Plan A - Design #1						Out of range
MARTIN 3030 05H - Plan A - Design #1						Out of range
MARTIN FED 3031 01H - Plan B - Design #1	6,927.20	6,379.20	634.29	587.86	13.661	CC
MARTIN FED 3031 01H - Plan B - Design #1	11,906.00	11,420.00	650.65	389.17	2.488	ES
MARTIN FED 3031 01H - Plan B - Design #1	12,000.00	11,420.00	657.40	389.92	2.458	SF
MARTIN FED 3031 02H - Plan B - Design #1	7,076.26	6,573.89	1,313.52	1,263.34	26.176	CC
MARTIN FED 3031 02H - Plan B - Design #1	12,000.00	11,415.38	1,320.34	1,051.55	4.912	ES
MARTIN FED 3031 02H - Plan B - Design #1	12,113.72	11,415.38	1,332.42	1,058.36	4.862	SF
MARTIN FED 3031 03H - Plan B - Design #1						Out of range
MARTIN FED 3031 04H - Plan B - Design #1						Out of range

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Reference Site:	9N-60W-25 PEGGY 2501 PAD	MD Reference:	RKB = 16' @ 4908.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	PEGGY 2501-16H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan B	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						
9N-59W-30 Offsets						
PTASNIK 1-30-9-59 - Verdad PR Well - Actual Titan Surv	6,678.76	6,055.25	742.53	697.58	16.519	CC
PTASNIK 1-30-9-59 - Verdad PR Well - Actual Titan Surv	6,700.00	6,051.92	742.94	697.04	16.187	ES
PTASNIK 1-30-9-59 - Verdad PR Well - Actual Titan Surv	7,100.00	5,953.83	875.56	811.22	13.608	SF
PTASNIK 2-30-9-59 - Verdad PR Well - Actual Titan Surv	6,659.54	5,943.00	873.95	830.81	20.254	CC
PTASNIK 2-30-9-59 - Verdad PR Well - Actual Titan Surv	6,700.00	5,943.00	875.17	830.53	19.602	ES
PTASNIK 2-30-9-59 - Verdad PR Well - Actual Titan Surv	7,200.00	5,839.95	1,047.28	981.80	15.994	SF
PTASNIK 30-44-9-59 - Verdad PR Well - Actual Precision						Out of range
PTASNIK 3-30-9-59 - Verdad PR Well - Actual Titan Surv	6,734.06	6,158.00	871.18	824.61	18.708	CC
PTASNIK 3-30-9-59 - Verdad PR Well - Actual Titan Surv	6,750.00	6,158.00	871.41	824.03	18.390	ES
PTASNIK 3-30-9-59 - Verdad PR Well - Actual Titan Surv	7,200.00	6,042.95	1,027.76	959.83	15.129	SF
PTASNIK 4-30-9-59 - Verdad PR Well - Actual Titan Surv	6,735.32	5,994.71	1,018.65	973.85	22.740	CC
PTASNIK 4-30-9-59 - Verdad PR Well - Actual Titan Surv	6,750.00	5,992.51	1,018.79	973.46	22.475	ES
PTASNIK 4-30-9-59 - Verdad PR Well - Actual Titan Surv	7,400.00	5,859.00	1,250.55	1,178.73	17.413	SF
9N-60W-25 Offsets						
Shull 1-25-9-60 - Verdad Original Well - Actual Precision	5,700.00	5,360.54	230.17	159.87	3.274	ES, SF
Shull 1-25-9-60 - Verdad Original Well - Actual Precision	6,329.91	6,024.46	212.49	168.08	4.785	CC
Shull 1-25-9-60 - Verdad PR Sidetrack Well - Actual Prec	5,700.00	5,360.54	230.17	159.87	3.274	ES, SF
Shull 1-25-9-60 - Verdad PR Sidetrack Well - Actual Prec	6,329.91	6,024.46	212.49	168.08	4.785	CC
Shull 2-25-9-60 - Verdad PR Well - Actual Precision Surv	4,307.07	4,057.34	188.75	141.53	3.997	CC, ES
Shull 2-25-9-60 - Verdad PR Well - Actual Precision Surv	4,400.00	4,144.25	192.12	143.72	3.969	SF
Shull 3-25-9-60 - Verdad PR Well - Actual Precision Surv	3,549.47	3,386.46	168.88	129.27	4.264	CC, ES, SF
Shull 4-25-9-60 - Verdad Original Wellbore - Actual Preci	3,345.10	3,207.97	152.16	115.89	4.195	CC, ES, SF
Shull 4-25-9-60 - Verdad PR Sidetrack Well - Actual Prec	3,366.08	3,226.99	183.64	147.26	5.048	CC, ES
Shull 4-25-9-60 - Verdad PR Sidetrack Well - Actual Prec	3,400.00	3,255.63	184.52	147.87	5.034	SF
Shull 5-25-9-60 - Verdad PR Well - Actual Titan Surveys	6,452.55	6,218.45	108.86	66.05	2.543	CC, ES
Shull 5-25-9-60 - Verdad PR Well - Actual Titan Surveys	6,500.00	6,220.82	119.05	67.84	2.325	SF
Shull 6-25-9-60 - Verdad PR Well - Actual Titan Surveys	4,603.64	4,290.57	245.19	191.72	4.585	CC, ES
Shull 6-25-9-60 - Verdad PR Well - Actual Titan Surveys	4,800.00	4,477.43	253.63	196.97	4.477	SF
Shull 7-25-9-60 - Verdad PR Well - Actual Titan Surveys	3,613.86	3,370.61	131.80	93.90	3.478	CC, ES, SF
Shull 8-25-9-60 - Verdad PR Well - Actual Titan Surveys	2,963.11	2,796.62	148.44	116.44	4.639	CC, ES
Shull 8-25-9-60 - Verdad PR Well - Actual Titan Surveys	3,000.00	2,827.78	149.75	117.41	4.631	SF
9N-60W-25 PEGGY 2501 PAD						
PEGGY 2501-01H - Verdad PR Well - Actual Baker Surve	0.00	10.00	132.26			
PEGGY 2501-01H - Verdad PR Well - Actual Baker Surve	100.00	109.97	132.27	124.74	17.556	ES
PEGGY 2501-01H - Verdad PR Well - Actual Baker Surve	201.70	211.35	132.34	124.75	17.442	SF
PEGGY 2501-02H - Verdad PR Well - Actual Baker Surve	129.60	139.60	112.08	104.54	14.857	CC, ES
PEGGY 2501-02H - Verdad PR Well - Actual Baker Surve	201.70	211.33	112.26	104.67	14.803	SF
PEGGY 2501-04H - Plan B - Design #1	201.70	203.70	96.00	88.43	12.679	CC, ES, SF
PEGGY 2501-06H - Plan B - Design #1	201.70	203.70	79.98	72.41	10.563	CC, ES, SF
PEGGY 2501-08H - Plan B - Design #1	201.70	202.70	63.98	56.41	8.451	CC, ES, SF
PEGGY 2501-10H - Plan B - Design #1	201.70	203.70	47.99	40.41	6.338	CC, ES, SF
PEGGY 2501-12H - Plan B - Design #1	201.70	203.70	31.99	24.42	4.225	CC, ES
PEGGY 2501-12H - Plan B - Design #1	14,772.67	14,309.47	1,248.55	863.28	3.241	SF
PEGGY 2501-14H - Plan B - Design #1	201.70	202.70	16.00	8.42	2.113	CC, ES
PEGGY 2501-14H - Plan B - Design #1	14,772.67	14,516.83	624.41	237.85	1.615	SF
9N-60W-36 Offsets						
STATE-HUSKY #1 - Bennett D/A Well - No Surveys	2,441.63	2,290.88	926.03	829.58	9.602	CC
STATE-HUSKY #1 - Bennett D/A Well - No Surveys	2,700.00	2,525.90	932.23	825.03	8.696	ES
STATE-HUSKY #1 - Bennett D/A Well - No Surveys	4,200.00	3,890.30	1,179.52	1,014.31	7.139	SF

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Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 16' @ 4908.00usft (RIG)

Offset Depths are relative to Offset Datum

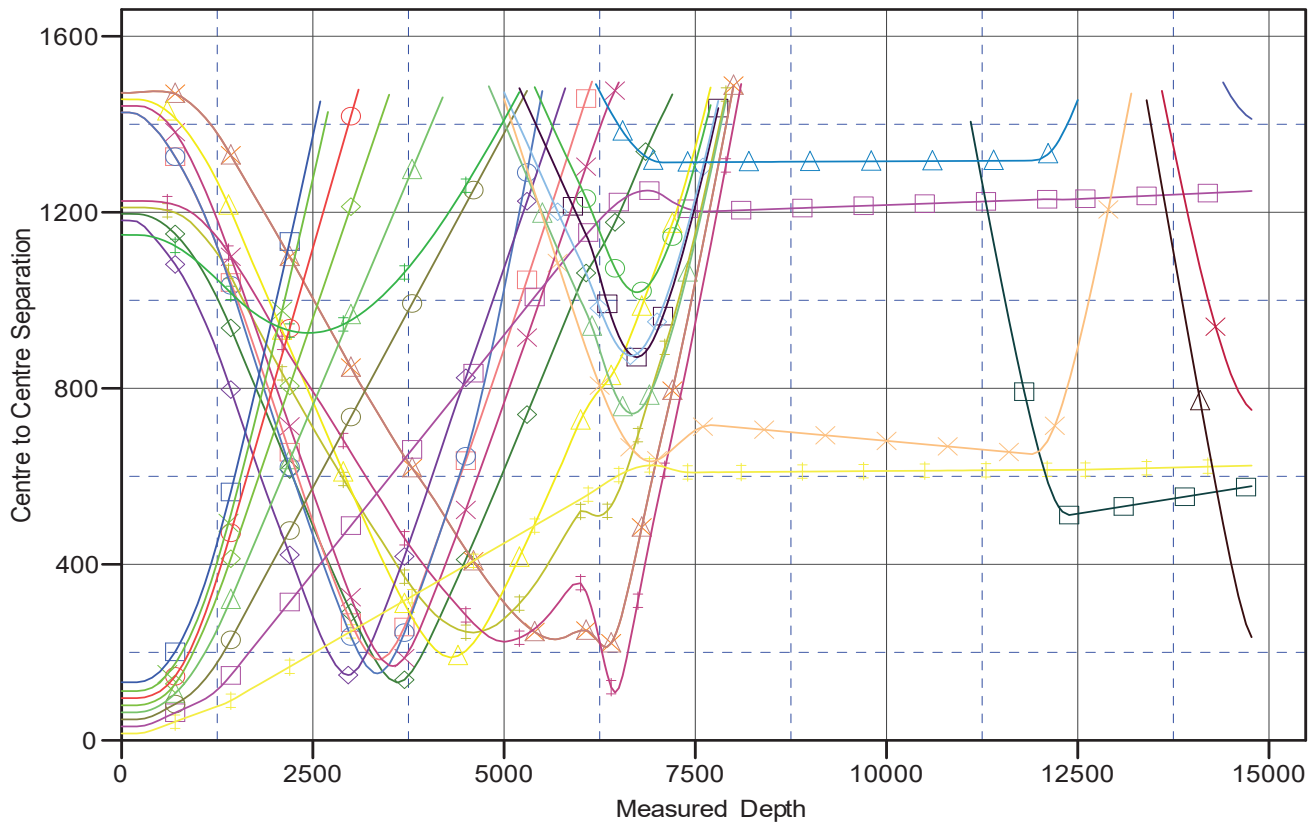
Central Meridian is -105.500000

Coordinates are relative to: PEGGY 2501-16H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.94°

Ladder Plot



LEGEND

Shul 7-25-960, Verdad PR Well, Actual Titan Surveys V0	PEGGY 2501-08H, Plan B, Design#1 V0	PTASNIK 230-9-59, Verdad PR Well, Actual Titan Surveys V0
Shul 1-25-960, Verdad PR Sidetrack Well, Actual Precision Surveys Grid to True V0	PEGGY 2501-14H, Plan B, Design#1 V0	PTASNIK 130-9-59, Verdad PR Well, Actual Titan Surveys V0
Shul 1-25-960, Verdad Original Well, Actual Precision Surveys Grid to True V0	PEGGY 2501-01H, Verdad PR Well, Actual Baker Surveys V0	SONIC STAR 1101-09H, Plan B, Design #2 V0
Shul 6-25-960, Verdad PR Well, Actual Titan Surveys V0	PEGGY 2501-04H, Plan B, Design#1 V0	SONIC STAR 1101-16H, Plan B, Design #2 V0
Shul 4-25-960, Verdad PR Sidetrack Well, Actual Precision Surveys Grid to True V0	PEGGY 2501-12H, Plan B, Design#1 V0	SONIC STAR 1101-11H, Plan B, Design #2 V0
Shul 4-25-960, Verdad Original Wellbore, Actual Precision Surveys Grid to True V0	PEGGY 2501-06H, Plan B, Design#1 V0	SONIC STAR 1101-13H, Plan B, Design #2 V0
Shul 2-25-960, Verdad PR Well, Actual Precision Surveys Grid to True V0	PEGGY 2501-02H, Verdad PR Well, Actual Baker Surveys V0	MARTIN FED 3031 01H, Plan B, Design #1 V0
Shul 8-25-960, Verdad PR Well, Actual Precision Surveys Grid to True V0	PEGGY 2501-10H, Plan B, Design#1 V0	MARTIN FED 3031 02H, Plan B, Design #1 V0
Shul 5-25-960, Verdad PR Well, Actual Titan Surveys V0	PTASNIK 330-9-59, Verdad PR Well, Actual Titan Surveys V0	STATE-HUSKY #1, Bennett D/A Well, No Surveys V0
Shul 3-25-960, Verdad PR Well, Actual Precision Surveys Grid to True V0	PTASNIK 430-9-59, Verdad PR Well, Actual Titan Surveys V0	

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Reference Depths are relative to RKB = 16' @ 4908.00usft (RIG)

Offset Depths are relative to Offset Datum

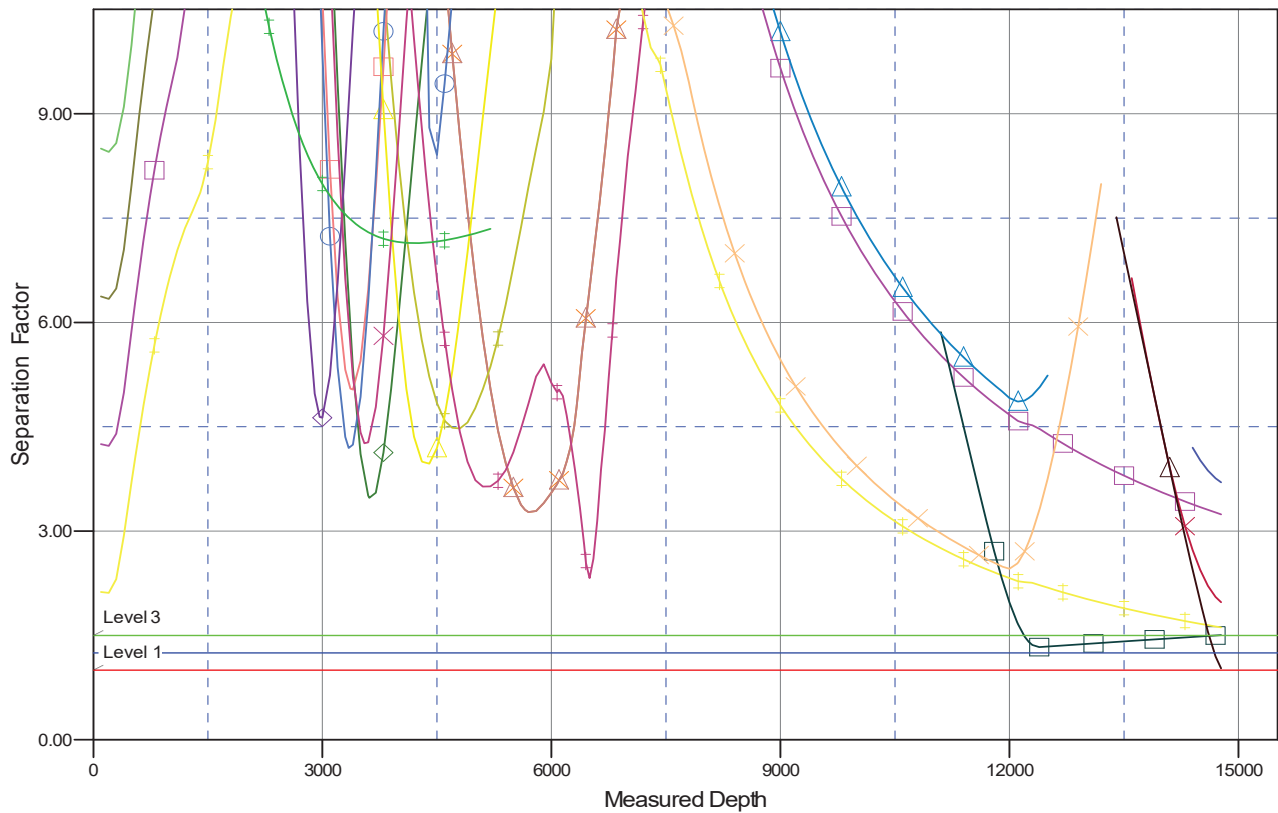
Central Meridian is -105.500000

Coordinates are relative to: PEGGY 2501-16H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.94°

Separation Factor Plot



LEGEND

Shul 1-25-960, Verdad PR Well, Actual Titan Surveys V0	PEGGY 2501-08H, Plan B, Design#1 V0	PTASNIK 230-9-59, Verdad PR Well, Actual Titan Surveys V0
Shul 1-25-960, Verdad PR Sidetrack Well, Actual Precision Surveys Grid to True V0	PEGGY 2501-14H, Plan B, Design#1 V0	PTASNIK 130-9-59, Verdad PR Well, Actual Titan Surveys V0
Shul 1-25-960, Verdad Original Well, Actual Precision Surveys Grid to True V0	PEGGY 2501-01H, Verdad PR Well, Actual Baker Surveys V0	SONIC STAR 1101-09H, Plan B, Design #2 V0
Shul 2-25-960, Verdad PR Well, Actual Titan Surveys V0	PEGGY 2501-04H, Plan B, Design#1 V0	SONIC STAR 1101-16H, Plan B, Design #2 V0
Shul 2-25-960, Verdad PR Sidetrack Well, Actual Precision Surveys Grid to True V0	PEGGY 2501-12H, Plan B, Design#1 V0	SONIC STAR 1101-11H, Plan B, Design #2 V0
Shul 2-25-960, Verdad Original Wellbore, Actual Precision Surveys Grid to True V0	PEGGY 2501-06H, Plan B, Design#1 V0	SONIC STAR 1101-13H, Plan B, Design #2 V0
Shul 2-25-960, Verdad PR Well, Actual Precision Surveys Grid to True V0	PEGGY 2501-02H, Verdad PR Well, Actual Baker Surveys V0	MARTIN FED 3031 01H, Plan B, Design #1 V0
Shul 3-25-960, Verdad PR Well, Actual Titan Surveys V0	PEGGY 2501-10H, Plan B, Design#1 V0	MARTIN FED 3031 02H, Plan B, Design #1 V0
Shul 3-25-960, Verdad PR Well, Actual Precision Surveys Grid to True V0	PTASNIK 330-9-59, Verdad PR Well, Actual Titan Surveys V0	STATE-HUSKY #1, Bennett D/A Well, No Surveys V0
	PTASNIK 430-9-59, Verdad PR Well, Actual Titan Surveys V0	