

VERDAD RESOURCES

WATTENBERG FIELD

9N-59W-17 TIMBRO 1717 PAD

TIMBRO 1717-14H

Wellbore #1

Design #1

Anticollision Summary Report

02 September, 2021

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well TIMBRO 1717-14H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 5031.00usft (RIG)
Reference Site:	9N-59W-17 TIMBRO 1717 PAD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	TIMBRO 1717-14H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	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	9/2/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	1,700.00	Design #1 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination
1,700.00	11,503.80	Design #1 (Wellbore #1)	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						
9N-59W-08 TIMBRO 9-59-8B PAD						
TIMBRO 9-59 8B-9-1 - Wellbore #1 - Design #1						Out of range
TIMBRO 9-59 8B-9-2 - Wellbore #1 - Design #2						Out of range
TIMBRO 9-59 8B-9-4 - Wellbore #1 - Design #1						Out of range
TIMBRO 9-59 8B-9-8 - Wellbore #1 - Design #1	5,959.31	11,019.99	821.70	656.48	4.973	CC
TIMBRO 9-59 8B-9-8 - Wellbore #1 - Design #1	6,000.00	11,023.11	824.00	655.47	4.889	ES
TIMBRO 9-59 8B-9-8 - Wellbore #1 - Design #1	6,050.00	11,026.76	833.04	661.01	4.842	SF
TIMBRO 9-59 8B-9-9 - Verdad PR Well - Actual Baker Su	6,112.90	11,299.27	628.80	481.16	4.259	CC
TIMBRO 9-59 8B-9-9 - Verdad PR Well - Actual Baker Su	6,150.00	11,302.64	630.96	477.63	4.115	ES
TIMBRO 9-59 8B-9-9 - Verdad PR Well - Actual Baker Su	6,250.00	11,311.38	657.61	491.67	3.963	SF
9N-59W-16 Offsets Incomplete						
Wild Horse #16-13H - Whiting PR Well - Actual Ensign &	9,720.08	5,927.50	1,091.56	833.67	4.233	CC, ES
Wild Horse #16-13H - Whiting PR Well - Actual Ensign &	9,800.00	5,912.00	1,094.56	835.59	4.227	SF
WILDHORSE 16-13L - BNN Western IJ Well - Actual Ens	9,697.03	6,286.78	969.10	875.48	10.352	CC
WILDHORSE 16-13L - BNN Western IJ Well - Actual Ens	9,700.00	6,286.83	969.10	875.39	10.342	ES
WILDHORSE 16-13L - BNN Western IJ Well - Actual Ens	9,900.00	6,289.83	990.12	891.66	10.056	SF
9N-59W-17 Offsets						
Timbro Ranch 17-11-9-59 - Verdad PR Well - Actual Prec						Out of range
9N-59W-17 TIMBRO 1717 PAD						
TIMBRO 1717-08H - Plan B - Design #1	200.00	199.00	96.00	88.43	12.684	CC, ES, SF
TIMBRO 1717-09H - Plan B - Design #1	200.00	199.00	79.98	72.42	10.568	CC, ES, SF
TIMBRO 1717-10H - Plan B - Design #1	200.00	199.00	64.00	56.43	8.456	CC, ES, SF
TIMBRO 1717-11H - Plan B - Design #1	200.00	199.00	47.98	40.42	6.340	CC, ES, SF
TIMBRO 1717-12H - Plan B - Design #1	200.00	199.00	32.00	24.43	4.228	CC, ES, SF
TIMBRO 1717-13H - Plan B - Design #1	200.00	200.00	15.99	8.42	2.112	CC, ES, SF
9N-59W-18 Offsets						
FEDERAL #1-18 - McCulloch D/A Well - No Surveys						Out of range
WILDHORSE #18-1834H - Whiting PR Well - Actual Cath						Out of range
Wildhorse #18-1844H - Whiting PR Well - Actual Ensign						Out of range
9N-59W-19 Offsets						
Ptasnik Federal LC19-74HN - Noble Energy PR Well - Ac						Out of range

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Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary						
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Offset Well - Wellbore - Design						
9N-59W-20 Offsets						
Ptasnik LC20-75HN - Noble PR Well - Actual DDC Surve						Out of range
SW IGO #1 - Rock Oil D/A Well - No Surveys						Out of range
9N-59W-29 Offsets Incomplete						
Rico LC29-74-1HNA - Noble PR Well - Actual Sperry Sur						Out of range
Rico LC29-76-1HNA - Noble PR Well - Actual DDC Surve						Out of range
Rico LC29-78-1HNC - Noble PR Well - Actual Sperry Sur						Out of range
Tina LC29-73-1HNA - Noble PR Well - Actual DDC Surve	11,503.80	15,463.00	1,078.29	870.74	5.195	CC, ES, SF
Tina LC29-75-1HNA - Noble PR Well - Actual Pathfinder						Out of range
Tina LC29-77-1HNA - Noble PR Well - Actual DDC Surve						Out of range
Trisha LC29-73HNB - Noble PR Well - Actual DDC Surve	11,503.80	15,628.00	1,348.50	1,076.33	4.955	CC, ES, SF
Trisha LC29-74HNB - Noble PR Well - Actual Sperry Sur						Out of range
Trisha LC29-76HNB - Noble PR Well - Actual DDC Surve						Out of range
Trisha LC29-77HNB - Noble PR Well - Actual Sperry Sur						Out of range
Trisha LC29-78HNB - Noble PR Well - Actual Sperry Sur						Out of range

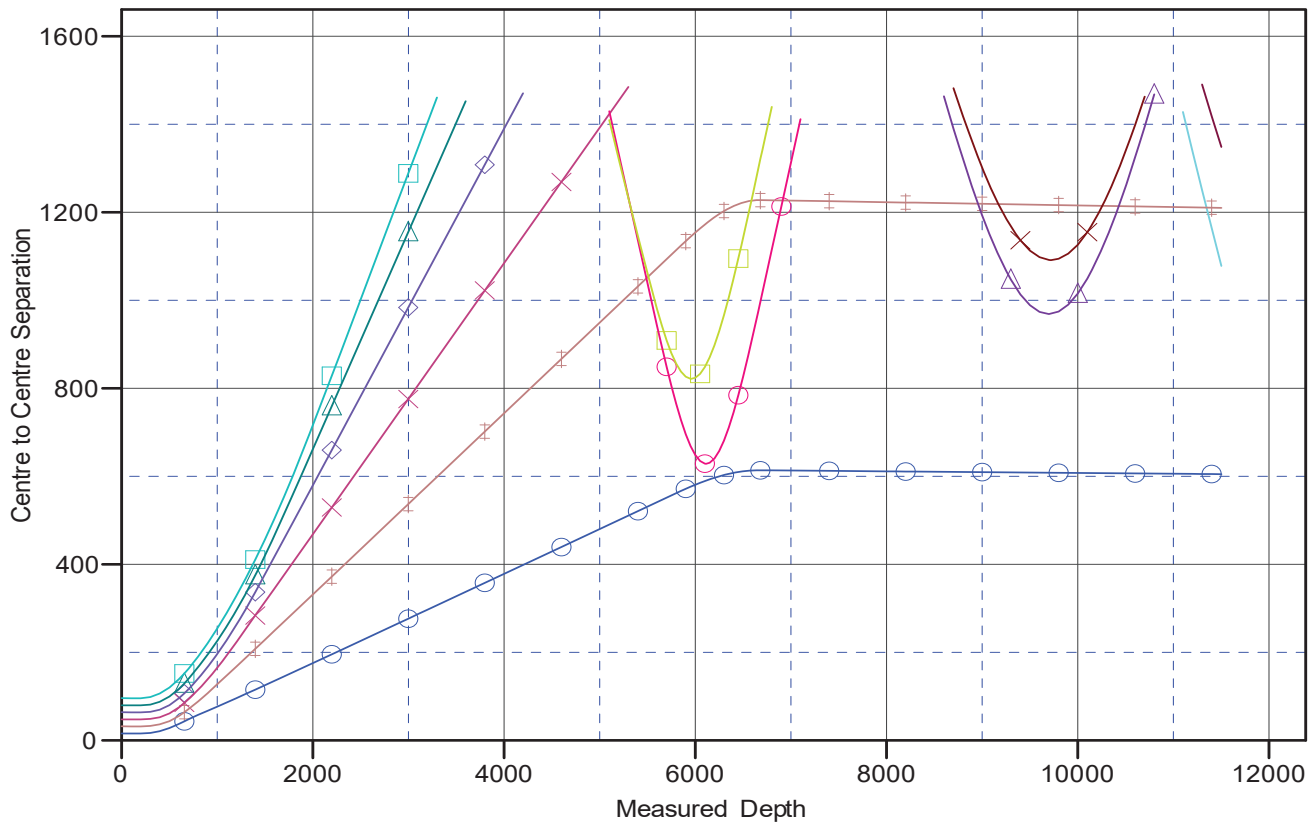
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Reference Depths are relative to RKB = 20' @ 5031.00usft (RIG)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: TIMBRO 1717-14H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.97°

Ladder Plot



LEGEND

- | | | |
|---|--------------------------------------|---|
| Trisha LC29-73HNB, Noble PR Well, Actual DOC Surveys V0 | TIMBRO 1717-09H, Plan B, Design#1 V0 | TIMBRO 969 BB-9-9, Verdad PR Well, Actual Baker Surveys V0 |
| Tina LC29-73-1HNA, Noble PR Well, Actual DOC Surveys V0 | TIMBRO 1717-12H, Plan B, Design#1 V0 | TIMBRO 969 BB-9-9, Wellbore #1, Design #1 V0 |
| TIMBRO 1717-09H, Plan B, Design#1 V0 | TIMBRO 1717-10H, Plan B, Design#1 V0 | Wild Horse #16-13H, Whiting PR Well, Actual Ensign & SIB Surveys V0 |
| TIMBRO 1717-13H, Plan B, Design#1 V0 | TIMBRO 1717-11H, Plan B, Design#1 V0 | WILDHORSE 16-13L, BNN Western LJ Well, Actual Ensign Surveys V0 |

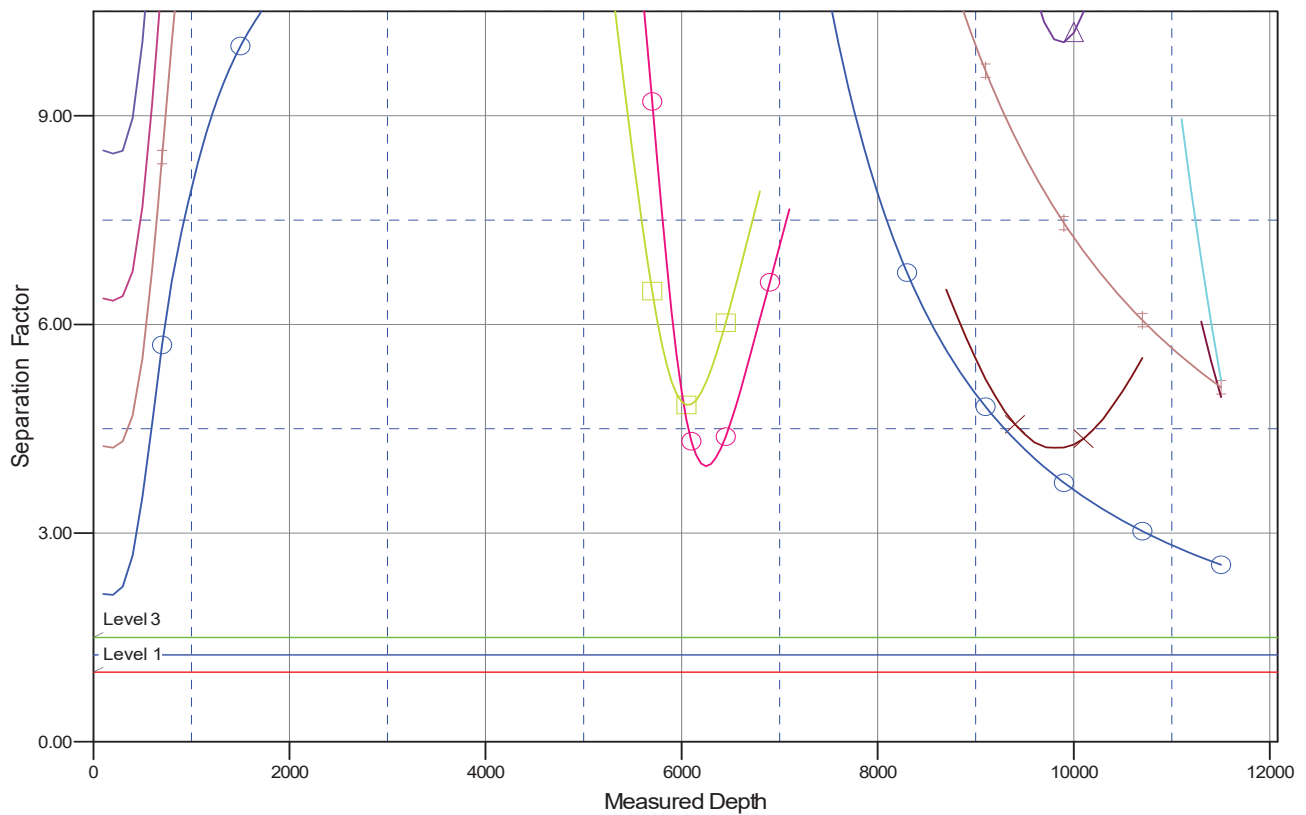
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Grid Convergence at Surface is: 0.97°

Separation Factor Plot



LEGEND

Trisha LC29-73HNB, Noble PR Well, Actual DDC Surveys V0
Tina LC29-73-1HNA, Noble PR Well, Actual DDC Surveys V0
TIMBRO 1717-08H, Plan B, Design#1 V0
TIMBRO 1717-13H, Plan B, Design#1 V0

TIMBRO 1717-09H, Plan B, Design#1 V0
TIMBRO 1717-12H, Plan B, Design#1 V0
TIMBRO 1717-10H, Plan B, Design#1 V0
TIMBRO 1717-11H, Plan B, Design#1 V0

TIMBRO 959 BB-9-9, Verdad PR Well, Actual Baker Surveys V0
TIMBRO 959 BB-9-9, Wellbore #1, Design #1 V0
Wild Horse #6-13H, Whiting PR Well, Actual Ensign & SLB Surveys V0
WILDHORSE 16-13L, BNN Western LJ Well, Actual Ensign Surveys V0