

VERDAD RESOURCES

WATTENBERG FIELD

9N-59W-01 TIMBRO 0101 PAD

TIMBRO 0112-02H

Plan A

Design #1

Anticollision Summary Report

18 January, 2023

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well TIMBRO 0112-02H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4959.00usft (RIG)
Reference Site:	9N-59W-01 TIMBRO 0101 PAD	MD Reference:	RKB = 20' @ 4959.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	TIMBRO 0112-02H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan A	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	1/18/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
20.00	1,697.00	SLB MWD Surface Surveys (Plan A)	ISCWSA MWD	Fixed:v2:standard declination
1,697.00	17,019.63	Design #1 (Plan A)	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						
10N-58W-30 Offsets Incomplete						
RAZOR FEDERAL 30L-1902 - FUNDARE PR Well - Actua						Out of range
RAZOR FEDERAL 30L-3101 - FUNDARE PR Well - Actua						Out of range
10N-59W-36 Offsets						
STATE #1 - US GOLD P&A Well - No Surveys						Out of range
TERRACE 36-11H - FUNDARE Original Wellbore - Actua						Out of range
TERRACE 36-11H - FUNDARE PR Sidetrack - Actual En						Out of range
TERRACE 36-32M - FUNDARE P&A Well - No Surveys						Out of range
WOLF 36-3624H - FUNDARE SI Well - Actual Ensign Su	6,170.49	10,300.00	1,053.80	932.11	8.659	CC
WOLF 36-3624H - FUNDARE SI Well - Actual Ensign Su	6,200.00	10,300.00	1,054.47	931.52	8.576	ES
WOLF 36-3624H - FUNDARE SI Well - Actual Ensign Su	6,300.00	10,300.00	1,066.55	940.30	8.448	SF
9N-58W-05 Offsets Incomplete						
HESTON LD06-620 - NBL Original Well (Grid to True) - A						Out of range
HESTON LD06-620 - NBL SI Sidetrack Well (Grid to True						Out of range
HESTON LD06-625 - NBL PR Well - Actual Sperry Surve						Out of range
HESTON LD06-630 - NBL PR Well - Actual Sperry Surve						Out of range
NUGENT LD06-655 - NBL PR Well - Actual SLB Surveys						Out of range
NUGENT LD06-665 - NBL PR Well - Actual SLB Surveys						Out of range
REAGAN LD06-675 - NBL PR Well - Actual BKR Survey						Out of range
REAGAN LD06-685 - NBL PR Well - Actual Gyrodata & S						Out of range
Timbro LD06-64HN - Noble PR Well - Actual DDC Surve						Out of range
9N-58W-07 Offsets Incomplete						
STRIPES FEDERAL LD18-785 - NBL PR Well - Actual B						Out of range
TIMBRO FEDERAL LD 07-78HN - NBL SI Well - Actual D						Out of range
9N-59W-01 Offsets						
BUCHER #1 - Todd Gross P&A Well - No Surveys	7,336.91	6,094.00	329.50	88.47	1.367	Level 3, CC, ES, SF
TIMBRO RANCH 1-41-9-59 - VERDAD Pilot Hole - Actua						Out of range
TIMBRO RANCH 1-41-9-59 - VERDAD PR Well - Actual						Out of range

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Site Error:	0.00 usft	North Reference:	True
Reference Well:	TIMBRO 0112-02H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan A	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
9N-59W-01 TIMBRO 0101 PAD						
TIMBRO 0112-01H - Plan A - Actual SLB Surveys	248.45	248.40	14.76	7.13	1.934	CC
TIMBRO 0112-01H - Plan A - Actual SLB Surveys	253.00	252.93	14.77	7.13	1.934	ES
TIMBRO 0112-01H - Plan A - Actual SLB Surveys	1,797.00	1,783.00	65.22	27.51	1.729	SF
TIMBRO 0112-01H - Plan A - Design #1	248.45	248.40	14.76	7.13	1.934	CC
TIMBRO 0112-01H - Plan A - Design #1	253.00	252.93	14.77	7.13	1.934	ES, SF
TIMBRO 0112-02H - Plan A - Actual SLB Surveys	2,000.00	1,762.00	237.99	229.50	28.035	CC, ES, SF
TIMBRO 0112-03H - Plan A - Actual SLB Surveys	20.00	20.00	16.06			
TIMBRO 0112-03H - Plan A - Actual SLB Surveys	197.00	197.00	16.13	8.53	2.124	ES, SF
TIMBRO 0112-03H - Plan A - Design #1	20.00	20.00	16.06			
TIMBRO 0112-03H - Plan A - Design #1	197.00	197.00	16.13	8.53	2.124	ES
TIMBRO 0112-03H - Plan A - Design #1	17,020.37	16,812.63	624.54	138.67	1.285	Level 3, SF
TIMBRO 0112-04H - Plan A - Actual SLB Surveys	20.00	20.00	31.58			
TIMBRO 0112-04H - Plan A - Design #1	20.00	20.00	31.58			
TIMBRO 0112-04H - Plan A - Design #1	17,020.37	16,646.01	1,249.27	763.74	2.573	SF
TIMBRO 0112-05H - Plan A - Actual SLB Surveys	20.00	20.00	47.91			
TIMBRO 0112-05H - Plan A - Actual SLB Surveys	197.00	196.81	48.26	40.67	6.358	SF
TIMBRO 0112-05H - Plan A - Design #1	20.00	20.00	47.91			
TIMBRO 0112-05H - Plan A - Design #1	197.00	196.81	48.26	40.67	6.358	SF
TIMBRO 0112-06H - Plan A - Actual SLB Surveys	20.00	20.00	63.98			
TIMBRO 0112-06H - Plan A - Actual SLB Surveys	197.00	196.80	64.50	56.91	8.497	SF
TIMBRO 0112-06H - Plan A - Design #1	20.00	20.00	63.98			
TIMBRO 0112-06H - Plan A - Design #1	197.00	196.80	64.50	56.91	8.497	SF
TIMBRO 0112-07H - Plan A - Actual SLB Surveys	20.00	20.00	79.76			
TIMBRO 0112-07H - Plan A - Design #1	20.00	20.00	79.76			
TIMBRO 0112-08H - Plan A - Actual SLB Surveys	20.00	20.00	96.10			
TIMBRO 0112-08H - Plan A - Actual SLB Surveys	253.00	252.17	97.13	89.48	12.708	SF
TIMBRO 0112-08H - Plan A - Design #1	20.00	20.00	96.10			
TIMBRO 0112-08H - Plan A - Design #1	253.00	252.17	97.13	89.48	12.708	SF
TIMBRO 3625-12H - Plan A - Design #1	20.00	20.00	160.07			
TIMBRO 3625-12H - Plan A - Design #1	341.00	340.99	161.68	153.97	20.960	SF
TIMBRO 3625-13H - Plan A - Design #1	20.00	20.00	176.14			
TIMBRO 3625-13H - Plan A - Design #1	401.00	400.96	179.58	171.77	23.003	SF
TIMBRO 3625-14H - Plan A - Design #1	20.00	20.00	192.20			
TIMBRO 3625-14H - Plan A - Design #1	431.00	430.93	196.82	188.96	25.054	SF
TIMBRO 3625-15H - Plan A - Design #1	20.00	20.00	207.98			
TIMBRO 3625-15H - Plan A - Design #1	253.00	249.61	208.77	201.15	27.390	SF
TIMBRO 3636-09H - Plan A - Design #1	20.00	20.00	112.16			
TIMBRO 3636-09H - Plan A - Design #1	6,450.00	6,526.43	499.13	400.55	5.064	SF
TIMBRO 3636-10H - Plan A - Design #1	6,550.69	6,648.11	97.05	43.07	1.798	CC
TIMBRO 3636-10H - Plan A - Design #1	6,600.00	6,623.42	106.16	40.51	1.617	ES, SF
TIMBRO 3636-11H - Plan A - Design #1	20.00	20.00	144.01			
TIMBRO 3636-11H - Plan A - Design #1	6,303.51	6,609.54	658.67	611.30	13.902	SF
9N-59W-02 Offsets Incomplete						
HAMLIN 1 - SNYDER P&A Well - No Surveys						Out of range
MCCLEMENT 1 - TEKOil P&A Well - No Surveys						Out of range
WILDHORSE 02-0214H - FUNDARE PR Well - Actual E						Out of range

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Reference Site:	9N-59W-01 TIMBRO 0101 PAD	MD Reference:	RKB = 20' @ 4959.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	TIMBRO 0112-02H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan A	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

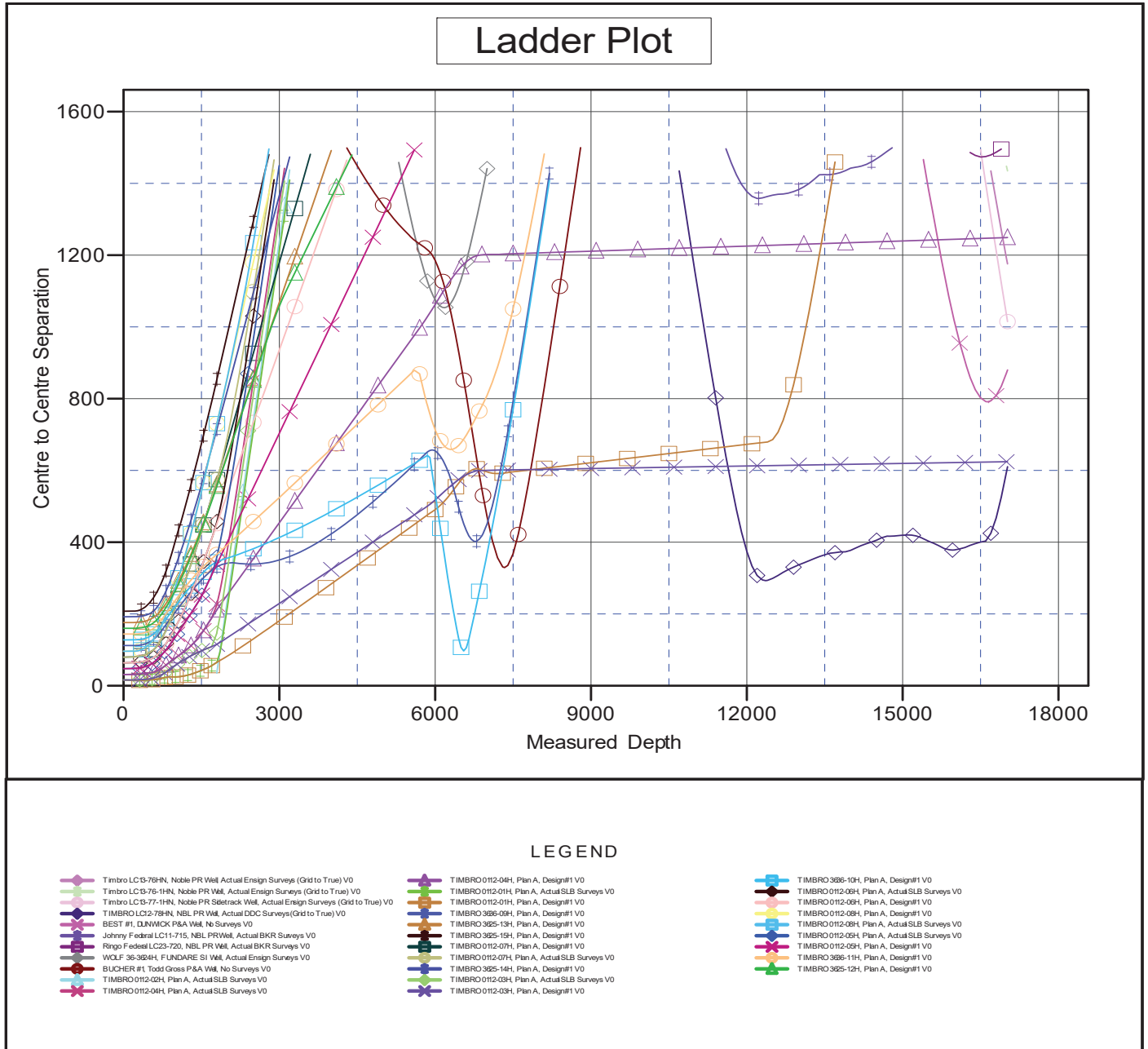
Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
9N-59W-11 Offsets Incomplete						
Johnny Federal LC11-715 - NBL PR Well - Actual BKR S	12,229.15	11,111.00	1,358.03	1,095.72	5.177	CC, ES
Johnny Federal LC11-715 - NBL PR Well - Actual BKR S	12,300.00	11,098.75	1,359.83	1,096.87	5.171	SF
Ringo Federal LC23-720 - NBL PR Well - Actual BKR Su	16,513.69	6,143.00	1,473.73	1,176.06	4.951	CC
Ringo Federal LC23-720 - NBL PR Well - Actual BKR Su	16,600.00	6,194.40	1,474.86	1,174.06	4.903	ES
Ringo Federal LC23-720 - NBL PR Well - Actual BKR Su	16,900.00	6,411.05	1,495.84	1,186.76	4.840	SF
9N-59W-12 Offsets						
BEST #1 - DUNWICK P&A Well - No Surveys	16,600.00	5,968.00	792.12	347.37	1.781	SF
BEST #1 - DUNWICK P&A Well - No Surveys	16,634.76	5,968.00	791.36	347.26	1.782	CC, ES
TIMBRO LC12-78HN - NBL PR Well - Actual DDC Surve	12,363.03	6,192.24	293.10	129.27	1.789	CC
TIMBRO LC12-78HN - NBL PR Well - Actual DDC Surve	16,600.00	10,400.00	403.55	55.84	1.161	Level 2, ES, SF
9N-59W-13 Offsets						
TIMBRO LC13-72HN - NBL PR Well - Actual DDC Surve						Out of range
9N-59W-24 Offsets Incomplete						
Timbro LC13-73HN - Noble PR Well - Actual Sperry Surv						Out of range
Timbro LC13-74-1HN - Noble PR Well - Actual Sperry Su						Out of range
Timbro LC13-74HN - Noble PR Well - Actual Sperry Surv						Out of range
Timbro LC13-75-1HN - Noble PR Well - Actual Sperry Su						Out of range
Timbro LC13-75HN - Noble T/A Well - Actual Ensign Sur						Out of range
Timbro LC13-76-1HN - Noble PR Well - Actual Ensign Su	17,020.37	10,339.00	1,435.13	1,114.64	4.478	CC, ES, SF
Timbro LC13-76HN - Noble PR Well - Actual Ensign Surv	17,020.37	10,420.00	1,175.69	897.21	4.222	CC, ES, SF
Timbro LC13-77-1HN - Noble Original Well - Actual Ensig						Out of range
Timbro LC13-77-1HN - Noble PR Sidetrack Well - Actual	17,020.37	10,290.00	1,014.86	793.36	4.582	CC, ES, SF
WINCHESTER FEDERAL LC24-715 - Noble PR Well - A						Out of range

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Reference Site:	9N-59W-01 TIMBRO 0101 PAD	MD Reference:	RKB = 20' @ 4959.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	TIMBRO 0112-02H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan A	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 4959.00usft (RIG)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: TIMBRO 0112-02H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 1.02°



Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well TIMBRO 0112-02H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4959.00usft (RIG)
Reference Site:	9N-59W-01 TIMBRO 0101 PAD	MD Reference:	RKB = 20' @ 4959.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	TIMBRO 0112-02H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan A	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 4959.00usft (RIG)

Offset Depths are relative to Offset Datum

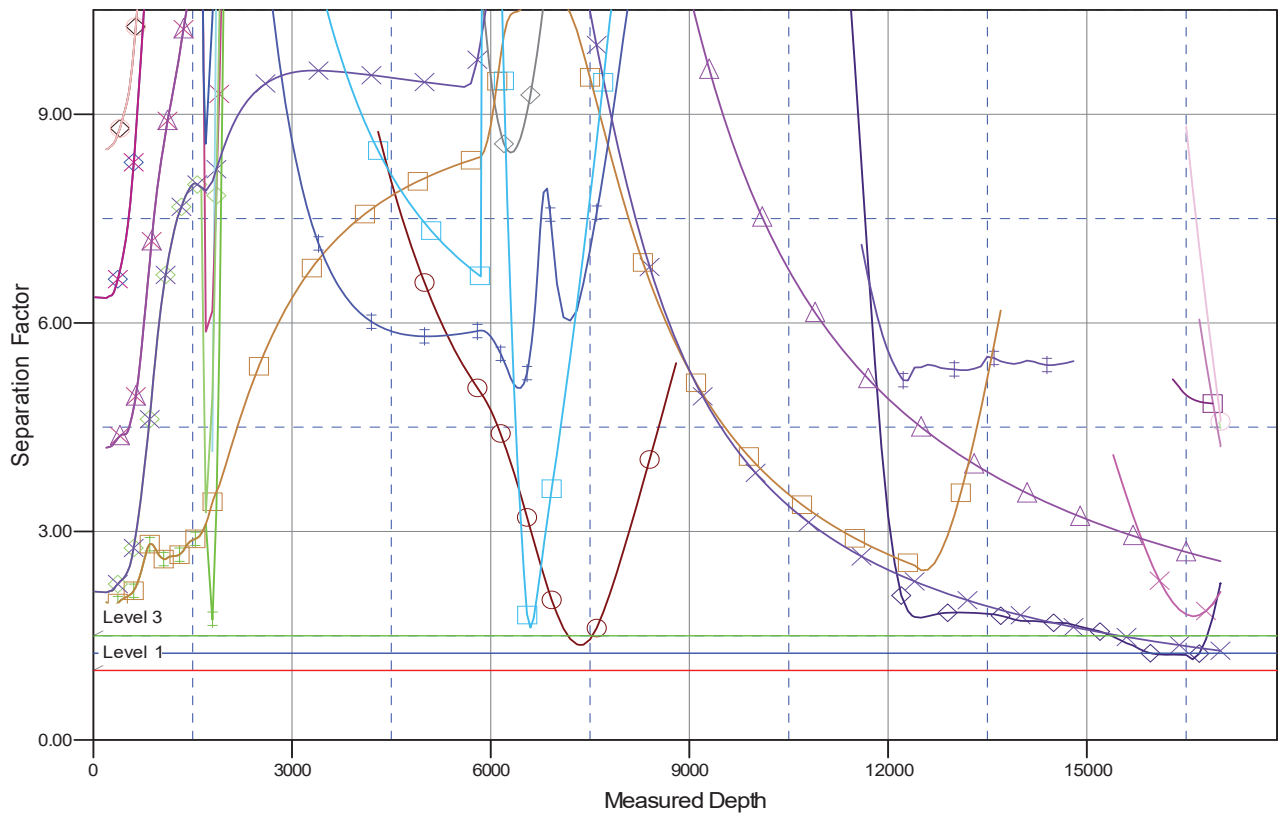
Central Meridian is -105.500000

Coordinates are relative to: TIMBRO 0112-02H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 1.02°

Separation Factor Plot



LEGEND

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> ◆ Timbro LCS-78-N, Noble PR Well, Actual Ensign Surveys (Grid to True) V0 ◆ Timbro LCS-76-1H-N, Noble PR Well, Actual Ensign Surveys (Grid to True) V0 ◆ Timbro LCS-77-1H-N, Noble PR Sbitrack Well, Actual Ensign Surveys (Grid to True) V0 ◆ TIMBRO LCS-78-N, NBL PR Well, Actual DDC Surveys (Grid to True) V0 ✕ BEST #1, DJNWK P&A Well, No Surveys V0 ◆ Johnny Federal LC11-715, NBL PR Well, Actual BKR Surveys V0 ◆ Ringo Federal LC23-720, NBL PR Well, Actual BKR Surveys V0 ◆ WOLF 35-32H, FUNDARE SI Well, Actual Ensign Surveys V0 ◆ BUCHER #1, Todd Gross P&A Well, No Surveys V0 ◆ TIMBRO 0112-02H, Plan A, Actual SLB Surveys V0 ✕ TIMBRO 0112-04H, Plan A, Actual SLB Surveys V0 | <ul style="list-style-type: none"> ◆ TIMBRO 0112-04H, Plan A, Design#1 V0 ◆ TIMBRO 0112-01H, Plan A, Actual SLB Surveys V0 ◆ TIMBRO 0112-01H, Plan A, Design#1 V0 ◆ TIMBRO 326-09H, Plan A, Design#1 V0 ◆ TIMBRO 325-13H, Plan A, Design#1 V0 ◆ TIMBRO 325-15H, Plan A, Design#1 V0 ◆ TIMBRO 0112-07H, Plan A, Design#1 V0 ◆ TIMBRO 0112-07H, Plan A, Actual SLB Surveys V0 ◆ TIMBRO 325-14H, Plan A, Design#1 V0 ◆ TIMBRO 0112-03H, Plan A, Actual SLB Surveys V0 ✕ TIMBRO 0112-03H, Plan A, Design#1 V0 | <ul style="list-style-type: none"> ◆ TIMBRO 326-10H, Plan A, Design#1 V0 ◆ TIMBRO 0112-08H, Plan A, Actual SLB Surveys V0 ◆ TIMBRO 0112-08H, Plan A, Design#1 V0 ◆ TIMBRO 0112-08H, Plan A, Design#1 V0 ◆ TIMBRO 0112-08H, Plan A, Actual SLB Surveys V0 ◆ TIMBRO 0112-09H, Plan A, Actual SLB Surveys V0 ◆ TIMBRO 0112-09H, Plan A, Design#1 V0 ◆ TIMBRO 325-11H, Plan A, Design#1 V0 ◆ TIMBRO 325-12H, Plan A, Design#1 V0 |
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