

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 ONION 1907 PAD

ONION 1907-02H

Plan A

Design #1

Anticollision Summary Report

16 March, 2022

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well ONION 1907-02H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Reference Site:	1N-64W-19 ONION 1907 PAD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	ONION 1907-02H	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	3/16/2022			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	2,156.00	Design #1 (Plan A)	ISCWSA MWD	Fixed:v2:standard declination	
2,156.00	20,068.61	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						
1N-64W-06 Offsets Incomplete						
FLANIGAN 1A-6H - CPR PR Well - Actual Cathedral Sur						Out of range
FLANIGAN 1B-6H - CPR PR Well - Actual Cathedral Sur						Out of range
FLANIGAN 1C-6H - CPR SI Well - Actual Cathedral Surv						Out of range
FLANIGAN 1D-6H - CPR SI Well - Actual Cathedral Surv						Out of range
FLANIGAN 2A-6H - CPR SI Well - Actual Cathedral Surv	20,068.61	11,345.00	869.76	768.16	8.561	CC, ES, SF
FLANIGAN 2B-6H - CPR PR Well - Actual Cathedral Sur	20,068.61	11,495.00	1,004.97	753.13	3.991	CC, ES, SF
1N-64W-07 Offsets						
UPRR 52 PAN AM #1 - AMOCO DA Well - No Surveys						Out of range
1N-64W-19 BERG 1930 PAD						
BERG 1930-01H - Wellbore #1 - Design #1	200.00	200.00	195.67	188.10	25.857	CC
BERG 1930-01H - Wellbore #1 - Design #1	220.00	219.91	195.67	188.09	25.812	ES
BERG 1930-01H - Wellbore #1 - Design #1	300.00	299.46	196.73	189.08	25.715	SF
BERG 1930-02H - Wellbore #1 - Design #1	220.00	220.00	181.10	173.52	23.889	CC, ES
BERG 1930-02H - Wellbore #1 - Design #1	300.00	299.78	182.08	174.43	23.798	SF
BERG 1930-03H - Wellbore #1 - Design #1	220.00	220.00	166.79	159.21	22.002	CC, ES
BERG 1930-03H - Wellbore #1 - Design #1	300.00	299.99	167.77	160.12	21.924	SF
BERG 1930-04H - Wellbore #1 - Design #1	220.00	220.00	152.77	145.19	20.152	CC, ES
BERG 1930-04H - Wellbore #1 - Design #1	300.00	299.99	153.78	146.12	20.095	SF
BERG 1930-05H - Wellbore #1 - Design #1	220.00	220.00	139.23	131.65	18.366	CC, ES
BERG 1930-05H - Wellbore #1 - Design #1	300.00	299.99	140.26	132.61	18.329	SF
BERG 1930-06H - Wellbore #1 - Design #1	220.00	220.00	126.27	118.69	16.656	CC, ES
BERG 1930-06H - Wellbore #1 - Design #1	300.00	299.99	127.32	119.67	16.638	SF

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well ONION 1907-02H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Reference Site:	1N-64W-19 ONION 1907 PAD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	ONION 1907-02H	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						
1N-64W-19 GOURD 1930 PAD						
GOURD 1930-01H - Wellbore #1 - Design #1	1,460.57	1,470.65	167.67	153.86	12.137	CC
GOURD 1930-01H - Wellbore #1 - Design #1	1,600.00	1,609.19	168.40	153.54	11.330	ES
GOURD 1930-01H - Wellbore #1 - Design #1	2,000.00	2,006.65	178.33	161.43	10.554	SF
GOURD 1930-02H - Wellbore #1 - Design #1	2,356.24	2,367.37	90.76	73.32	5.203	CC, ES
GOURD 1930-02H - Wellbore #1 - Design #1	7,050.00	7,111.83	169.83	125.74	3.852	SF
GOURD 1930-03H - Wellbore #1 - Design #1	2,371.59	2,383.01	23.82	8.85	1.592	CC
GOURD 1930-03H - Wellbore #1 - Design #1	2,400.00	2,411.30	23.95	8.65	1.565	ES, SF
GOURD 1930-04H - Wellbore #1 - Design #1	1,588.56	1,600.57	75.75	63.43	6.148	CC
GOURD 1930-04H - Wellbore #1 - Design #1	1,600.00	1,611.91	75.77	63.38	6.115	ES
GOURD 1930-04H - Wellbore #1 - Design #1	1,700.00	1,711.08	77.10	64.09	5.927	SF
GOURD 1930-05H - Wellbore #1 - Design #1	1,096.60	1,107.95	80.50	70.38	7.956	CC
GOURD 1930-05H - Wellbore #1 - Design #1	1,100.00	1,111.30	80.50	70.37	7.942	ES
GOURD 1930-05H - Wellbore #1 - Design #1	1,200.00	1,209.75	82.51	71.84	7.729	SF
GOURD 1930-06H - Wellbore #1 - Design #1	874.00	884.66	77.82	68.56	8.405	CC, ES
GOURD 1930-06H - Wellbore #1 - Design #1	900.00	910.01	78.04	68.65	8.310	SF
1N-64W-19 Offsets						
STEVENS #1 - KPK P/A Well - No Surveys						Out of range
WEIMER #1 - Petro-American Energy D/A Well - No Surv						Out of range
1N-64W-19 ONION 1907 PAD						
ONION 1907-01H - Plan A - Design #1	393.92	393.14	15.54	7.78	2.002	CC
ONION 1907-01H - Plan A - Design #1	20,068.61	20,132.02	516.07	-111.61	0.822	Level 1, ES, SF
ONION 1907-03H - Plan A - Design #1	220.00	220.00	16.02	8.44	2.113	CC
ONION 1907-03H - Plan A - Design #1	20,068.61	20,052.89	516.08	-111.88	0.822	Level 1, ES, SF
ONION 1907-04H - Plan A - Design #1	200.00	200.00	32.01	24.44	4.229	CC, ES
ONION 1907-04H - Plan A - Design #1	20,068.61	20,044.06	1,032.17	407.23	1.652	SF
ONION 1907-05H - Plan A - Design #1	220.00	220.00	47.99	40.41	6.331	CC, ES, SF
ONION 1907-06H - Plan A - Design #1	220.00	220.00	64.01	56.43	8.444	CC, ES, SF
ONION 1907-07H - Plan A - Design #1	220.00	220.00	80.00	72.42	10.553	CC, ES, SF
ONION 1907-08H - Plan A - Design #1	220.00	220.00	96.02	88.43	12.665	CC, ES, SF
ONION 1907-09H - Plan A - Design #1	220.00	220.00	112.00	104.42	14.774	CC, ES
ONION 1907-09H - Plan A - Design #1	300.00	299.99	112.94	105.28	14.759	SF

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well ONION 1907-02H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Reference Site:	1N-64W-19 ONION 1907 PAD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	ONION 1907-02H	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 = 24' @ 5035.00usft (RIG)

Offset Depths are relative to Offset Datum

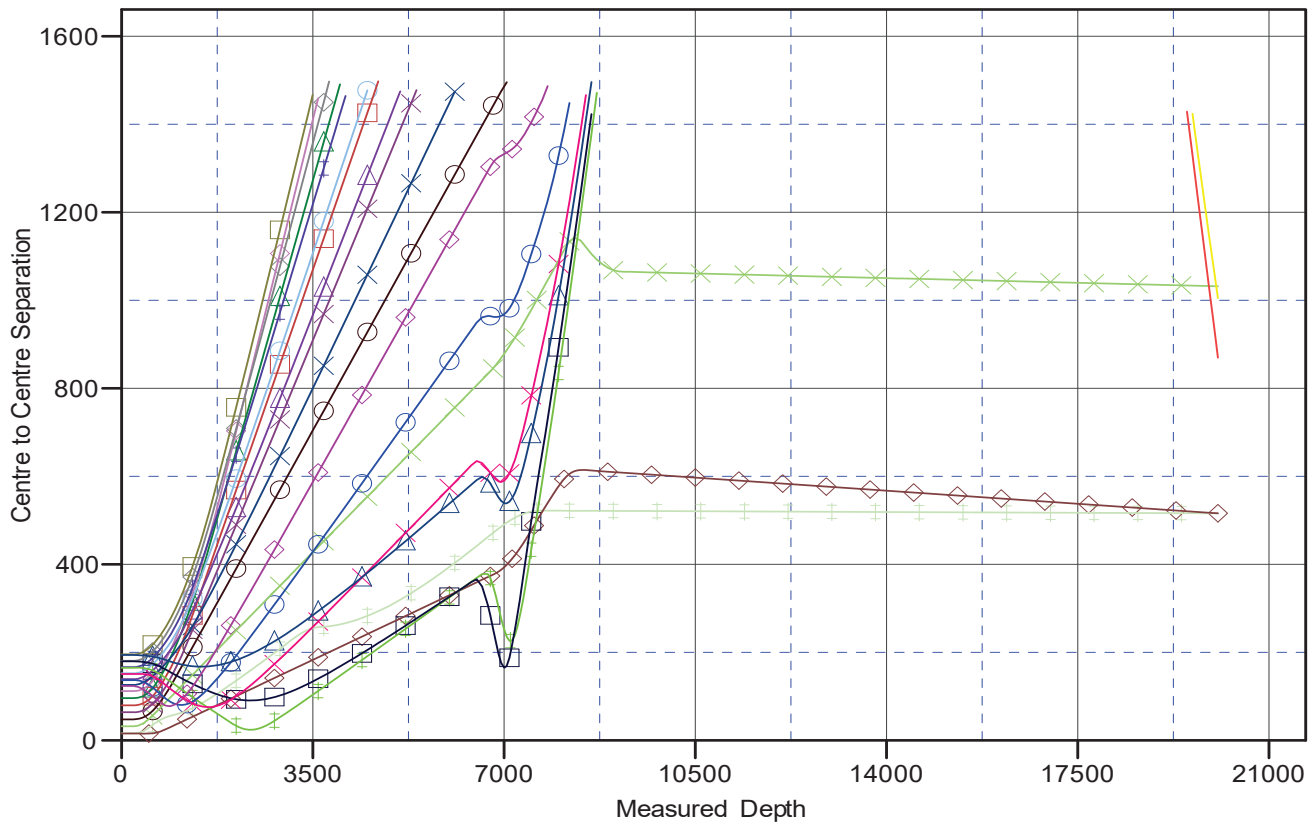
Central Meridian is -105.500000

Coordinates are relative to: ONION 1907-02H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Ladder Plot



LEGEND

ONION 1907-02H, Plan A, Design #1 V0	FLANIGAN2A-6H, CPR SI Well, Actual Cathedral Surveys V0	GOURD 1930-03H, Wellbore #1, Design #1 V0
ONION 1907-04H, Plan A, Design #1 V0	FLANIGAN2B-6H, CPR PR Well, Actual Cathedral Surveys V0	GOURD 1930-02H, Wellbore #1, Design #1 V0
ONION 1907-08H, Plan A, Design #1 V0	BERG 1930-03H, Wellbore #1, Design #1 V0	GOURD 1930-05H, Wellbore #1, Design #1 V0
ONION 1907-03H, Plan A, Design #1 V0	BERG 1930-01H, Wellbore #1, Design #1 V0	GOURD 1930-06H, Wellbore #1, Design #1 V0
ONION 1907-05H, Plan A, Design #1 V0	BERG 1930-04H, Wellbore #1, Design #1 V0	GOURD 1930-04H, Wellbore #1, Design #1 V0
ONION 1907-01H, Plan A, Design #1 V0	BERG 1930-02H, Wellbore #1, Design #1 V0	GOURD 1930-01H, Wellbore #1, Design #1 V0
ONION 1907-06H, Plan A, Design #1 V0	BERG 1930-06H, Wellbore #1, Design #1 V0	
ONION 1907-07H, Plan A, Design #1 V0	BERG 1930-05H, Wellbore #1, Design #1 V0	

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well ONION 1907-02H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Reference Site:	1N-64W-19 ONION 1907 PAD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	ONION 1907-02H	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 = 24' @ 5035.00usft (RIG)

Offset Depths are relative to Offset Datum

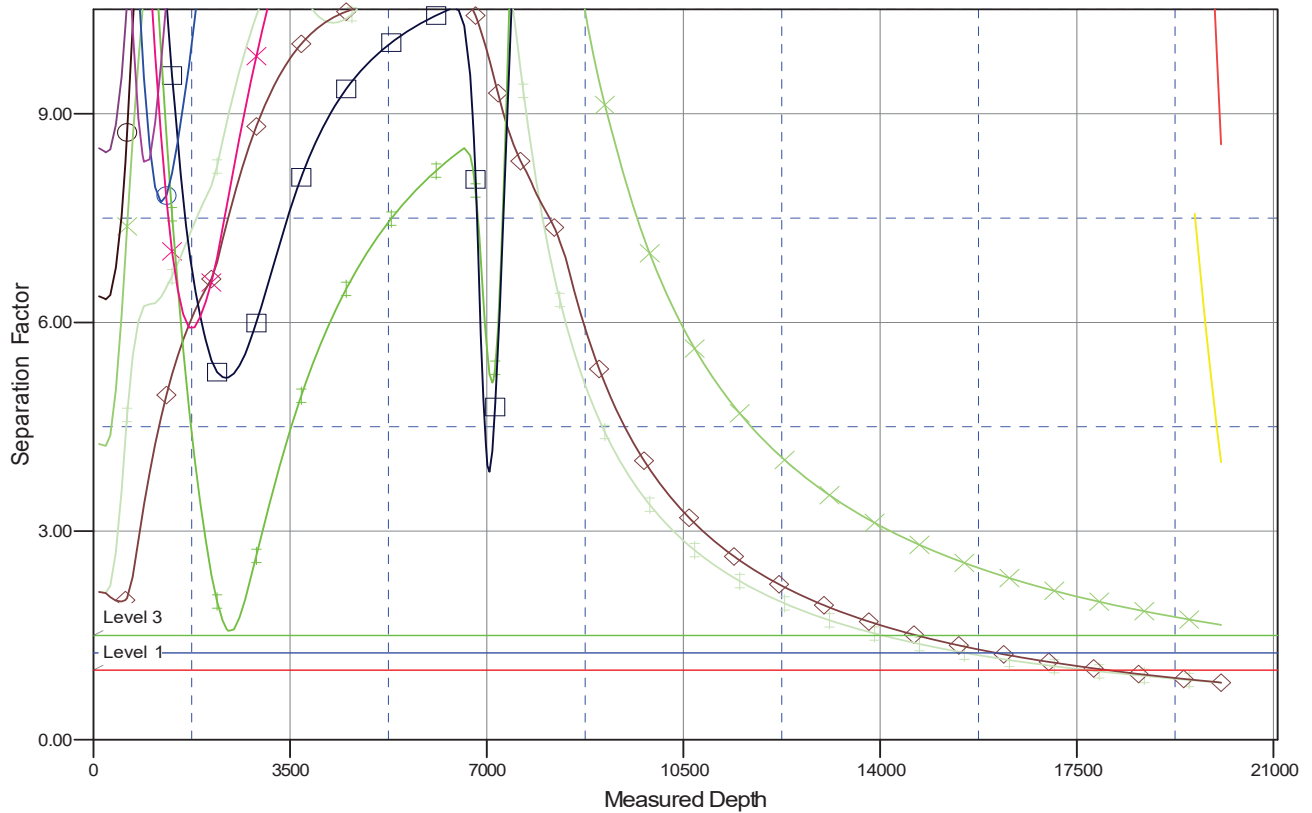
Central Meridian is -105.500000

Coordinates are relative to: ONION 1907-02H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Separation Factor Plot



LEGEND

ONION 190709H, Plan A, Design #1 V0	FLANIGAN2A-6H, CPR SI Well, Actual Cathedral Surveys V0	GOURD 1930-03H, Wellbore #1, Design #1 V0
ONION 190709H, Plan A, Design #1 V0	FLANIGAN2B-6H, CPR PR Well, Actual Cathedral Surveys V0	GOURD 1930-02H, Wellbore #1, Design #1 V0
ONION 190709H, Plan A, Design #1 V0	BERG 1930-03H, Wellbore #1, Design #1 V0	GOURD 1930-05H, Wellbore #1, Design #1 V0
ONION 190703H, Plan A, Design #1 V0	BERG 1930-01H, Wellbore #1, Design #1 V0	GOURD 1930-06H, Wellbore #1, Design #1 V0
ONION 190705H, Plan A, Design #1 V0	BERG 1930-04H, Wellbore #1, Design #1 V0	GOURD 1930-04H, Wellbore #1, Design #1 V0
ONION 190701H, Plan A, Design #1 V0	BERG 1930-02H, Wellbore #1, Design #1 V0	GOURD 1930-01H, Wellbore #1, Design #1 V0
ONION 190706H, Plan A, Design #1 V0	BERG 1930-06H, Wellbore #1, Design #1 V0	
ONION 190707H, Plan A, Design #1 V0	BERG 1930-05H, Wellbore #1, Design #1 V0	