

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 ONION 1907 PAD

ONION 1907-06H

Plan A

Design #1

Anticollision Summary Report

16 March, 2022

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well UNION 1907-06H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 24' @ 5035.00usft (RIG)
Reference Site:	1N-64W-19 UNION 1907 PAD	MD Reference:	RKB = 24' @ 5035.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	UNION 1907-06H	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	20,156.40	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	20,157.36	11,531.00	1,209.32	877.56	3.645	CC, ES, SF
FLANIGAN 1B-6H - CPR PR Well - Actual Cathedral Sur	20,157.36	11,455.00	910.74	784.88	7.236	CC, ES, SF
FLANIGAN 1C-6H - CPR SI Well - Actual Cathedral Surv	20,157.36	11,630.00	1,056.24	830.61	4.681	CC, ES, SF
FLANIGAN 1D-6H - CPR SI Well - Actual Cathedral Surv						Out of range
FLANIGAN 2A-6H - CPR SI Well - Actual Cathedral Surv						Out of range
FLANIGAN 2B-6H - CPR PR Well - Actual Cathedral Sur						Out of range
1N-64W-07 Offsets						
UPRR 52 PAN AM #1 - AMOCO DA Well - No Surveys	15,981.76	7,230.00	1,290.48	817.25	2.727	CC
UPRR 52 PAN AM #1 - AMOCO DA Well - No Surveys	16,000.00	7,230.00	1,290.61	816.62	2.723	ES
UPRR 52 PAN AM #1 - AMOCO DA Well - No Surveys	16,100.00	7,230.00	1,295.89	818.51	2.715	SF
1N-64W-19 BERG 1930 PAD						
BERG 1930-01H - Wellbore #1 - Design #1	774.20	778.11	174.35	165.53	19.766	CC
BERG 1930-01H - Wellbore #1 - Design #1	800.00	803.78	174.37	165.44	19.521	ES
BERG 1930-01H - Wellbore #1 - Design #1	1,500.00	1,486.38	201.82	187.19	13.799	SF
BERG 1930-02H - Wellbore #1 - Design #1	1,016.19	1,020.34	156.18	146.10	15.494	CC
BERG 1930-02H - Wellbore #1 - Design #1	1,200.00	1,202.23	157.09	145.48	13.539	ES
BERG 1930-02H - Wellbore #1 - Design #1	1,600.00	1,592.45	179.86	164.55	11.749	SF
BERG 1930-03H - Wellbore #1 - Design #1	1,276.19	1,280.82	133.22	121.06	10.960	CC
BERG 1930-03H - Wellbore #1 - Design #1	1,300.00	1,304.27	133.27	120.89	10.764	ES
BERG 1930-03H - Wellbore #1 - Design #1	1,700.00	1,700.38	145.97	130.01	9.150	SF
BERG 1930-04H - Wellbore #1 - Design #1	1,600.04	1,606.31	101.21	86.21	6.748	CC
BERG 1930-04H - Wellbore #1 - Design #1	1,700.00	1,705.73	101.75	85.96	6.445	ES
BERG 1930-04H - Wellbore #1 - Design #1	1,800.00	1,805.19	103.33	87.03	6.338	SF
BERG 1930-05H - Wellbore #1 - Design #1	2,200.00	2,207.22	40.40	23.76	2.427	ES
BERG 1930-05H - Wellbore #1 - Design #1	2,200.84	2,208.06	40.40	23.76	2.428	CC
BERG 1930-05H - Wellbore #1 - Design #1	7,150.00	7,196.34	118.29	67.21	2.316	SF
BERG 1930-06H - Wellbore #1 - Design #1	1,850.64	1,859.10	44.81	31.72	3.425	CC, ES
BERG 1930-06H - Wellbore #1 - Design #1	2,000.00	2,007.92	46.55	32.89	3.408	SF

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Site Error:	0.00 usft	North Reference:	True
Reference Well:	ONION 1907-06H	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	501.02	502.58	225.81	217.84	28.334	CC, ES
GOURD 1930-01H - Wellbore #1 - Design #1	700.00	697.99	233.93	225.42	27.487	SF
GOURD 1930-02H - Wellbore #1 - Design #1	549.57	554.37	211.30	203.23	26.190	CC, ES
GOURD 1930-02H - Wellbore #1 - Design #1	800.00	801.70	223.86	215.01	25.306	SF
GOURD 1930-03H - Wellbore #1 - Design #1	625.85	635.54	196.76	188.52	23.869	CC, ES
GOURD 1930-03H - Wellbore #1 - Design #1	800.00	809.70	202.06	193.27	22.982	SF
GOURD 1930-04H - Wellbore #1 - Design #1	755.03	772.75	181.74	173.16	21.181	CC, ES
GOURD 1930-04H - Wellbore #1 - Design #1	900.00	916.09	186.50	177.40	20.491	SF
GOURD 1930-05H - Wellbore #1 - Design #1	837.51	858.96	150.28	141.42	16.947	CC, ES
GOURD 1930-05H - Wellbore #1 - Design #1	1,000.00	1,020.22	156.05	146.52	16.363	SF
GOURD 1930-06H - Wellbore #1 - Design #1	939.28	963.53	120.56	111.35	13.087	CC, ES
GOURD 1930-06H - Wellbore #1 - Design #1	1,100.00	1,123.53	125.88	115.93	12.650	SF
1N-64W-19 Offsets						
STEVEN'S #1 - KPK P/A Well - No Surveys						Out of range
WEIMER #1 - Petro-American Energy D/A Well - No Surv	7,953.56	7,202.00	1,445.79	1,158.37	5.030	CC
WEIMER #1 - Petro-American Energy D/A Well - No Surv	8,000.00	7,202.00	1,446.53	1,157.55	5.006	ES
WEIMER #1 - Petro-American Energy D/A Well - No Surv	8,200.00	7,202.00	1,466.64	1,170.93	4.960	SF
1N-64W-19 ONION 1907 PAD						
ONION 1907-01H - Plan A - Design #1	200.02	200.02	80.00	72.43	10.572	CC, ES
ONION 1907-01H - Plan A - Design #1	300.00	298.42	80.62	72.97	10.537	SF
ONION 1907-02H - Plan A - Design #1	200.00	200.00	64.01	56.44	8.459	CC, ES, SF
ONION 1907-03H - Plan A - Design #1	416.63	416.63	47.99	40.19	6.147	CC
ONION 1907-03H - Plan A - Design #1	501.00	501.00	47.99	40.04	6.034	ES, SF
ONION 1907-04H - Plan A - Design #1	457.05	457.36	30.07	22.19	3.816	CC, ES
ONION 1907-04H - Plan A - Design #1	20,156.40	20,044.88	1,032.14	407.61	1.653	SF
ONION 1907-05H - Plan A - Design #1	501.00	501.00	16.02	8.06	2.014	CC
ONION 1907-05H - Plan A - Design #1	20,156.40	20,077.54	516.08	-112.28	0.821	Level 1, ES, SF
ONION 1907-07H - Plan A - Design #1	401.39	401.39	15.99	8.20	2.054	CC
ONION 1907-07H - Plan A - Design #1	20,157.36	20,255.95	516.08	-107.97	0.827	Level 1, ES, SF
ONION 1907-08H - Plan A - Design #1	316.55	316.55	32.01	24.33	4.172	CC
ONION 1907-08H - Plan A - Design #1	400.00	399.65	32.01	24.23	4.113	ES
ONION 1907-08H - Plan A - Design #1	20,157.36	20,425.11	1,032.17	404.14	1.644	SF
ONION 1907-09H - Plan A - Design #1	313.43	313.43	47.99	40.33	6.259	CC
ONION 1907-09H - Plan A - Design #1	400.00	399.86	48.01	40.23	6.169	ES, SF

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Site Error:	0.00 usft	North Reference:	True
Reference Well:	ONION 1907-06H	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

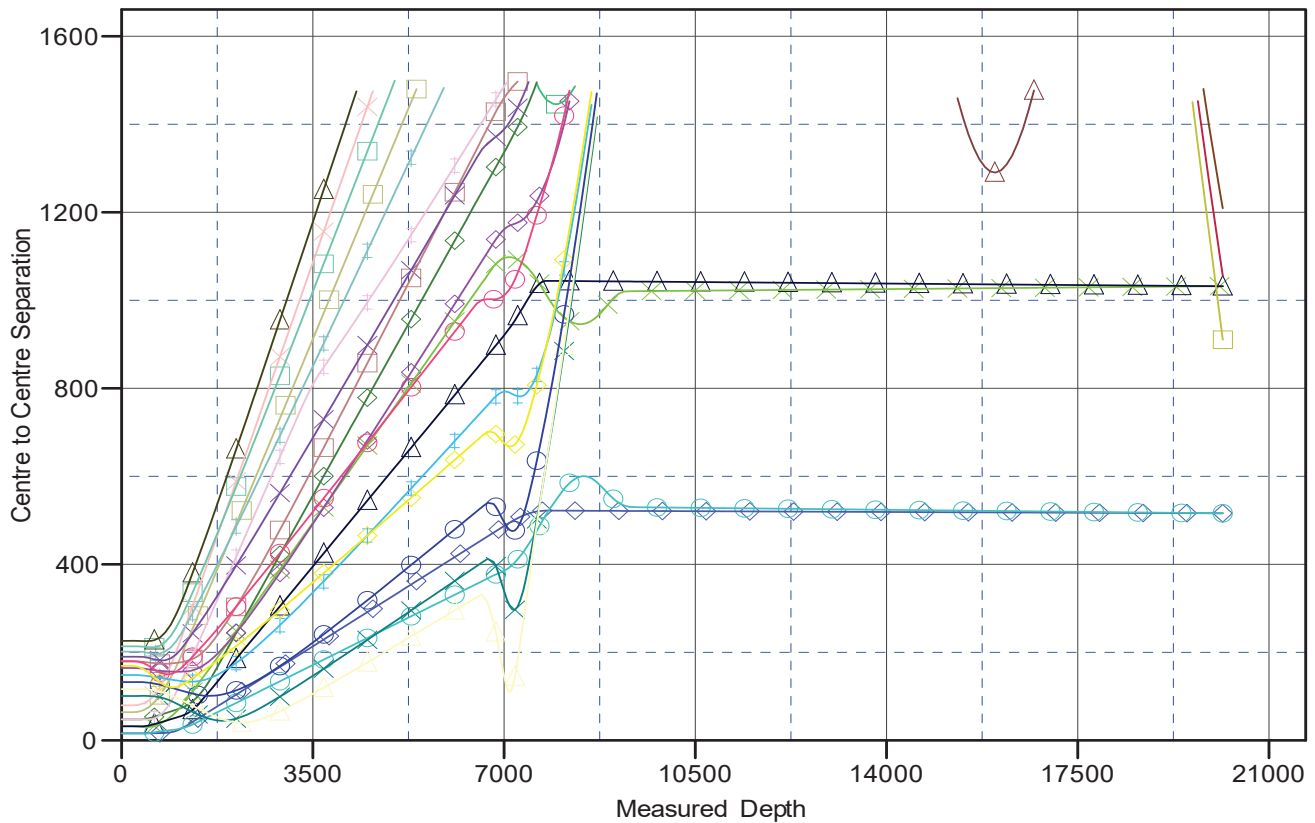
Central Meridian is -105.500000

Coordinates are relative to: ONION 1907-06H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Ladder Plot



LEGEND

WEIMER #1 Petro-American Energy DIA Well, No Surveys V0	UPRR S2 PIN AM #1, AMOCO DAWell, No Surveys V0	BERG 1930-05H, Wellbore #1, Design #1 V0
ONION 1907-09H, Plan A, Design #1 V0	FLANIGAN 1B-6H, CPR PR Well, Actual Cathedral Surveys V0	GOURD 1930-03H, Wellbore #1, Design #1 V0
ONION 1907-04H, Plan A, Design #1 V0	FLANIGAN 1C-6H, CPR SI Well, Actual Cathedral Surveys V0	GOURD 1930-02H, Wellbore #1, Design #1 V0
ONION 1907-08H, Plan A, Design #1 V0	FLANIGAN 1A-6H, CPR PR Well, Actual Cathedral Surveys V0	GOURD 1930-05H, Wellbore #1, Design #1 V0
ONION 1907-03H, Plan A, Design #1 V0	BERG 1930-03H, Wellbore #1, Design #1 V0	GOURD 1930-06H, Wellbore #1, Design #1 V0
ONION 1907-05H, Plan A, Design #1 V0	BERG 1930-01H, Wellbore #1, Design #1 V0	GOURD 1930-04H, Wellbore #1, Design #1 V0
ONION 1907-01H, Plan A, Design #1 V0	BERG 1930-04H, Wellbore #1, Design #1 V0	GOURD 1930-01H, Wellbore #1, Design #1 V0
ONION 1907-02H, Plan A, Design #1 V0	BERG 1930-02H, Wellbore #1, Design #1 V0	
ONION 1907-07H, Plan A, Design #1 V0	BERG 1930-06H, Wellbore #1, Design #1 V0	

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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

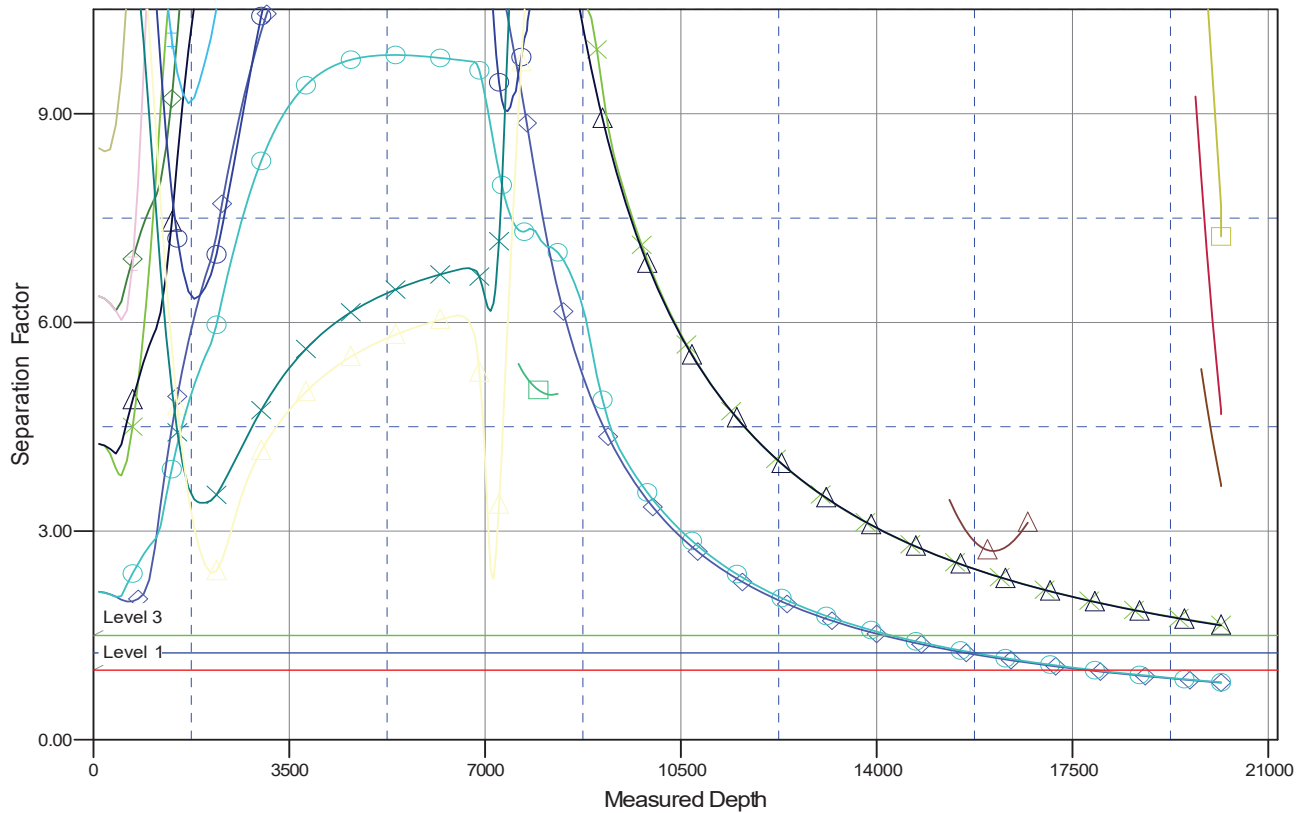
Central Meridian is -105.500000

Coordinates are relative to: ONION 1907-06H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Separation Factor Plot



LEGEND

WEIMER #1 Petro-American Energy DIA Well, No Surveys V0	UPRR S2 PAN AM #1, AMOCO DAWell, No Surveys V0	BERG 1930-05H, Wellbore #1, Design #1 V0
ONION 1907-09H, Plan A, Design #1 V0	FLANIGAN 1B-6H, CPR PR Well, Actual Cathedral Surveys V0	GOURD 1930-03H, Wellbore #1, Design #1 V0
ONION 1907-04H, Plan A, Design #1 V0	FLANIGAN 1C-6H, CPR SI Well, Actual Cathedral Surveys V0	GOURD 1930-02H, Wellbore #1, Design #1 V0
ONION 1907-08H, Plan A, Design #1 V0	FLANIGAN 1A-6H, CPR PR Well, Actual Cathedral Surveys V0	GOURD 1930-05H, Wellbore #1, Design #1 V0
ONION 1907-03H, Plan A, Design #1 V0	BERG 1930-03H, Wellbore #1, Design #1 V0	GOURD 1930-06H, Wellbore #1, Design #1 V0
ONION 1907-05H, Plan A, Design #1 V0	BERG 1930-01H, Wellbore #1, Design #1 V0	GOURD 1930-04H, Wellbore #1, Design #1 V0
ONION 1907-01H, Plan A, Design #1 V0	BERG 1930-04H, Wellbore #1, Design #1 V0	GOURD 1930-01H, Wellbore #1, Design #1 V0
ONION 1907-02H, Plan A, Design #1 V0	BERG 1930-02H, Wellbore #1, Design #1 V0	
ONION 1907-07H, Plan A, Design #1 V0	BERG 1930-06H, Wellbore #1, Design #1 V0	