

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**1N-64W-19 ONION 1907 PAD**

**ONION 1907-08H**

**Plan A**

**Design #1**

## **Anticollision Summary Report**

**16 March, 2022**

# Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well UNION 1907-08H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Reference Site:</b>	1N-64W-19 UNION 1907 PAD	<b>MD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	ONION 1907-08H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	3.28 usft	<b>Output errors are at</b>	2.45 sigma
<b>Reference Wellbore</b>	Plan A	<b>Database:</b>	EDM 5000.16 Single User Db
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	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	20,425.17	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	20,425.17	11,455.00	1,467.70	1,100.13	3.993	CC, ES, SF
FLANIGAN 1C-6H - CPR SI Well - Actual Cathedral Surv	20,425.17	11,630.00	989.65	740.93	3.979	CC, ES, SF
FLANIGAN 1D-6H - CPR SI Well - Actual Cathedral Surv	20,425.17	11,485.00	896.56	779.55	7.662	CC, ES, SF
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	16,248.25	7,230.00	254.20	-218.96	0.537	Level 1, CC, SF
UPRR 52 PAN AM #1 - AMOCO DA Well - No Surveys	16,300.00	7,230.00	259.41	-219.37	0.542	Level 1, ES
1N-64W-19 BERG 1930 PAD						
BERG 1930-01H - Wellbore #1 - Design #1	1,862.42	1,872.92	131.08	109.65	6.117	CC
BERG 1930-01H - Wellbore #1 - Design #1	1,900.00	1,910.24	131.15	109.45	6.043	ES
BERG 1930-01H - Wellbore #1 - Design #1	2,100.00	2,108.91	133.91	111.05	5.859	SF
BERG 1930-02H - Wellbore #1 - Design #1	2,400.00	2,414.43	71.08	46.76	2.923	SF
BERG 1930-02H - Wellbore #1 - Design #1	2,500.00	2,514.08	70.34	46.71	2.976	ES
BERG 1930-02H - Wellbore #1 - Design #1	2,525.06	2,539.05	70.31	46.89	3.003	CC
BERG 1930-03H - Wellbore #1 - Design #1	2,400.00	2,416.61	37.42	19.52	2.091	ES
BERG 1930-03H - Wellbore #1 - Design #1	2,537.93	2,554.12	35.84	19.89	2.246	CC
BERG 1930-03H - Wellbore #1 - Design #1	3,000.00	3,014.79	50.77	24.53	1.935	SF
BERG 1930-04H - Wellbore #1 - Design #1	1,731.99	1,749.98	70.49	56.08	4.894	CC, ES, SF
BERG 1930-05H - Wellbore #1 - Design #1	1,343.26	1,361.11	77.96	66.59	6.856	CC, ES
BERG 1930-05H - Wellbore #1 - Design #1	1,400.00	1,417.30	78.78	67.19	6.800	SF
BERG 1930-06H - Wellbore #1 - Design #1	1,146.77	1,163.06	91.73	81.73	9.179	CC, ES
BERG 1930-06H - Wellbore #1 - Design #1	1,200.00	1,215.76	92.42	82.21	9.046	SF

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<b>Reference Site:</b>	1N-64W-19 ONION 1907 PAD	<b>MD Reference:</b>	RKB = 24' @ 5035.00usft (RIG)
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<b>Reference Well:</b>	ONION 1907-08H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	3.28 usft	<b>Output errors are at</b>	2.45 sigma
<b>Reference Wellbore</b>	Plan A	<b>Database:</b>	EDM 5000.16 Single User Db
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
Offset Well - Wellbore - Design			Between Centres (usft)	Between Ellipses (usft)		
1N-64W-19 GOURD 1930 PAD						
GOURD 1930-01H - Wellbore #1 - Design #1	116.33	117.33	247.10	239.57	32.814	CC
GOURD 1930-01H - Wellbore #1 - Design #1	300.00	300.68	247.17	239.52	32.298	ES
GOURD 1930-01H - Wellbore #1 - Design #1	600.00	596.58	255.73	247.54	31.205	SF
GOURD 1930-02H - Wellbore #1 - Design #1	418.25	420.66	235.18	227.37	30.106	CC, ES
GOURD 1930-02H - Wellbore #1 - Design #1	700.00	700.00	248.74	240.27	29.351	SF
GOURD 1930-03H - Wellbore #1 - Design #1	458.54	463.68	223.80	215.92	28.403	CC, ES
GOURD 1930-03H - Wellbore #1 - Design #1	800.00	806.47	240.72	231.92	27.358	SF
GOURD 1930-04H - Wellbore #1 - Design #1	511.08	519.69	213.58	205.60	26.781	CC, ES
GOURD 1930-04H - Wellbore #1 - Design #1	900.00	914.76	230.10	220.97	25.207	SF
GOURD 1930-05H - Wellbore #1 - Design #1	731.83	756.04	190.05	181.53	22.284	CC, ES
GOURD 1930-05H - Wellbore #1 - Design #1	900.00	922.51	196.23	187.08	21.442	SF
GOURD 1930-06H - Wellbore #1 - Design #1	829.98	858.93	165.34	156.50	18.712	CC, ES
GOURD 1930-06H - Wellbore #1 - Design #1	1,000.00	1,027.75	171.43	161.87	17.937	SF
1N-64W-19 Offsets						
STEVENS #1 - KPK P/A Well - No Surveys	7,231.84	6,789.45	817.95	531.02	2.851	CC
STEVENS #1 - KPK P/A Well - No Surveys	7,250.00	6,805.62	818.20	530.29	2.842	ES
STEVENS #1 - KPK P/A Well - No Surveys	7,350.00	6,891.45	828.52	535.23	2.825	SF
WEIMER #1 - Petro-American Energy D/A Well - No Surv	8,219.90	7,202.00	401.58	111.48	1.384	Level 3, CC
WEIMER #1 - Petro-American Energy D/A Well - No Surv	8,300.00	7,202.00	409.49	110.73	1.371	Level 3, ES, SF
1N-64W-19 ONION 1907 PAD						
ONION 1907-01H - Plan A - Design #1	209.98	209.98	112.00	104.43	14.788	CC, ES
ONION 1907-01H - Plan A - Design #1	300.00	297.82	112.61	104.96	14.721	SF
ONION 1907-02H - Plan A - Design #1	200.00	200.00	96.02	88.45	12.688	CC, ES
ONION 1907-02H - Plan A - Design #1	300.00	297.81	96.92	89.27	12.670	SF
ONION 1907-03H - Plan A - Design #1	399.65	399.65	80.00	72.22	10.281	CC, ES, SF
ONION 1907-04H - Plan A - Design #1	444.56	445.74	61.64	53.78	7.845	CC, ES
ONION 1907-04H - Plan A - Design #1	500.00	501.06	62.24	54.28	7.820	SF
ONION 1907-05H - Plan A - Design #1	399.65	399.65	48.02	40.24	6.171	CC, ES, SF
ONION 1907-06H - Plan A - Design #1	399.65	399.65	32.01	24.22	4.113	CC, ES
ONION 1907-06H - Plan A - Design #1	20,425.10	20,157.36	1,032.17	404.14	1.644	SF
ONION 1907-07H - Plan A - Design #1	399.65	399.65	16.02	8.23	2.058	CC
ONION 1907-07H - Plan A - Design #1	20,425.17	20,255.95	516.08	-107.68	0.827	Level 1, ES, SF
ONION 1907-09H - Plan A - Design #1	313.51	313.51	15.99	8.32	2.085	CC
ONION 1907-09H - Plan A - Design #1	20,425.17	20,614.56	516.06	-111.76	0.822	Level 1, ES, SF

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

Reference Depths are relative to RKB = 24' @ 5035.00usft (RIG)

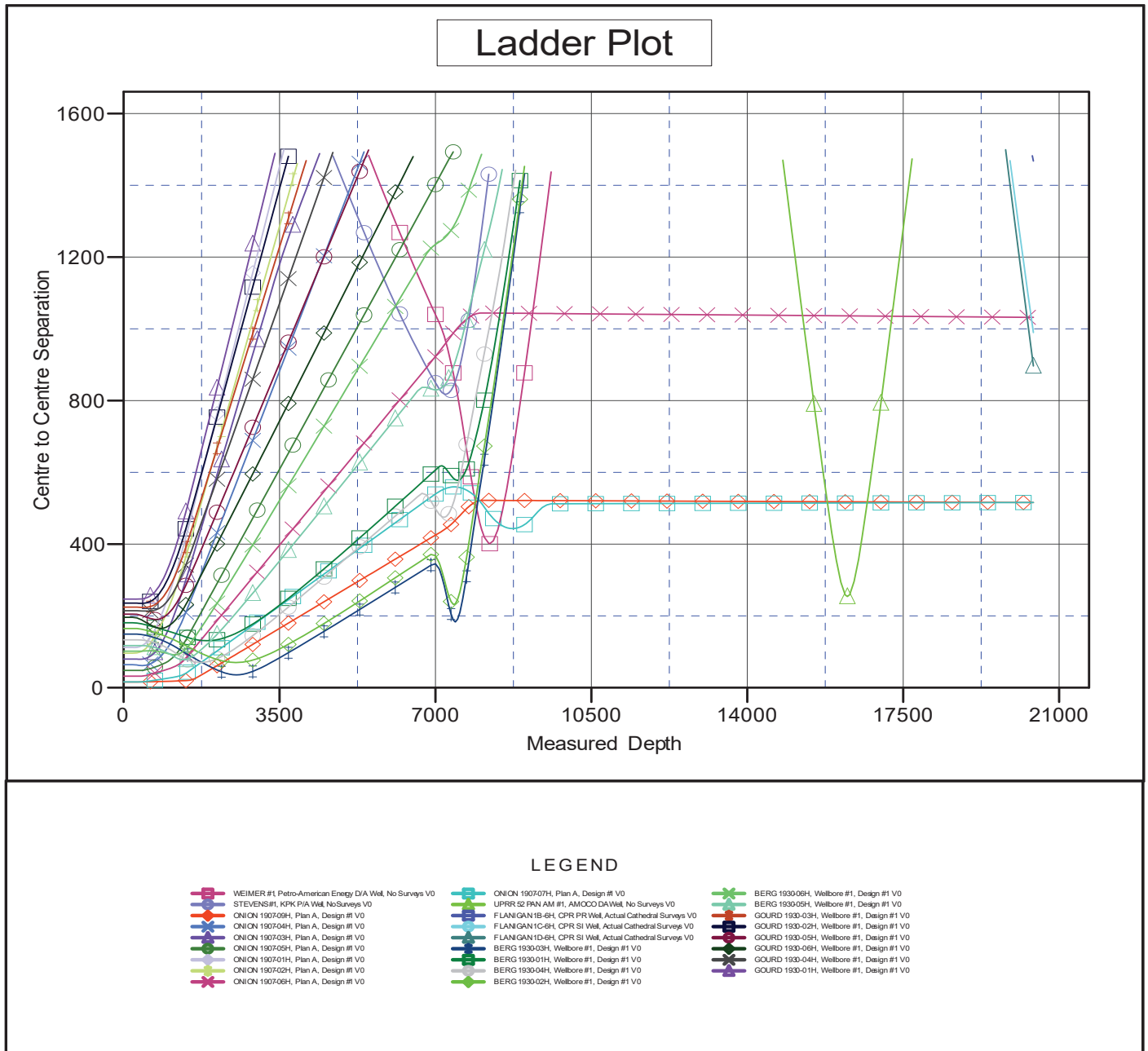
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: ONION 1907-08H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°



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<b>Reference Wellbore</b>	Plan A	<b>Database:</b>	EDM 5000.16 Single User Db
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to RKB = 24' @ 5035.00usft (RIG)

Offset Depths are relative to Offset Datum

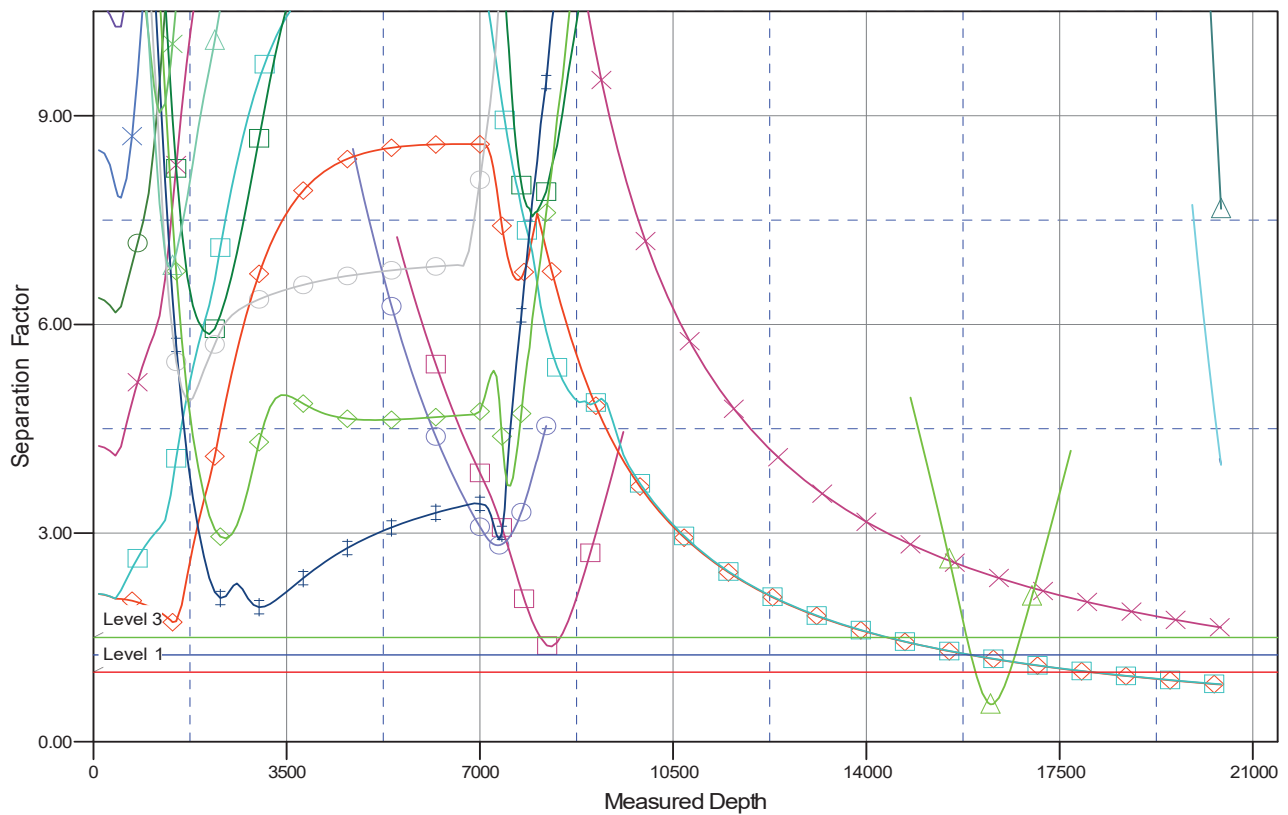
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### Separation Factor Plot



#### LEGEND

WEIMER #1 Petro-American Energy/DIA Well, No Surveys V0	ONION 190707H, Plan A, Design #1 V0	BERG 193006H, Wellbore #1, Design #1 V0
STEVENS #1, KPK P/A Well, No Surveys V0	UPRR S2 PAN AM #1, AMOCO DAWell, No Surveys V0	BERG 193005H, Wellbore #1, Design #1 V0
ONION 190709H, Plan A, Design #1 V0	FLANIGAN 1B-6H, CPR PR Well, Actual Cathedral Surveys V0	GOURD 1930-03H, Wellbore #1, Design #1 V0
ONION 190704H, Plan A, Design #1 V0	FLANIGAN 1C-6H, CPR SI Well, Actual Cathedral Surveys V0	GOURD 1930-02H, Wellbore #1, Design #1 V0
ONION 190703H, Plan A, Design #1 V0	FLANIGAN 1D-6H, CPR SI Well, Actual Cathedral Surveys V0	GOURD 1930-05H, Wellbore #1, Design #1 V0
ONION 190705H, Plan A, Design #1 V0	BERG 193003H, Wellbore #1, Design #1 V0	GOURD 1930-06H, Wellbore #1, Design #1 V0
ONION 190701H, Plan A, Design #1 V0	BERG 193001H, Wellbore #1, Design #1 V0	GOURD 1930-04H, Wellbore #1, Design #1 V0
ONION 190702H, Plan A, Design #1 V0	BERG 193004H, Wellbore #1, Design #1 V0	GOURD 1930-01H, Wellbore #1, Design #1 V0
ONION 190706H, Plan A, Design #1 V0	BERG 193002H, Wellbore #1, Design #1 V0	