

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 ONION 1907 PAD

ONION 1907-05H

Plan A

Design #1

Anticollision Summary Report

16 March, 2022

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Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well ONION 1907-05H
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 1907-05H	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	20,076.60	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	20,077.54	11,531.00	929.53	733.22	4.735	CC, ES, SF
FLANIGAN 1B-6H - CPR PR Well - Actual Cathedral Sur	20,077.54	11,455.00	983.34	807.54	5.594	CC, ES, SF
FLANIGAN 1C-6H - CPR SI Well - Actual Cathedral Surv	20,077.54	11,630.00	1,408.41	1,081.33	4.306	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	20,077.54	11,495.00	1,332.24	997.70	3.982	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	575.64	577.80	179.78	171.64	22.080	CC
BERG 1930-01H - Wellbore #1 - Design #1	600.00	602.07	179.82	171.61	21.913	ES
BERG 1930-01H - Wellbore #1 - Design #1	1,300.00	1,285.42	217.22	204.90	17.629	SF
BERG 1930-02H - Wellbore #1 - Design #1	622.89	625.43	163.88	155.64	19.876	CC, ES
BERG 1930-02H - Wellbore #1 - Design #1	1,300.00	1,290.87	190.95	178.80	15.713	SF
BERG 1930-03H - Wellbore #1 - Design #1	699.25	702.35	147.94	139.50	17.528	CC
BERG 1930-03H - Wellbore #1 - Design #1	700.00	703.09	147.94	139.50	17.523	ES
BERG 1930-03H - Wellbore #1 - Design #1	1,400.00	1,393.31	173.76	161.00	13.609	SF
BERG 1930-04H - Wellbore #1 - Design #1	997.29	1,001.92	130.81	121.12	13.490	CC
BERG 1930-04H - Wellbore #1 - Design #1	1,100.00	1,104.13	131.14	120.79	12.667	ES
BERG 1930-04H - Wellbore #1 - Design #1	1,500.00	1,498.29	149.04	135.71	11.183	SF
BERG 1930-05H - Wellbore #1 - Design #1	1,281.58	1,287.05	106.33	94.79	9.214	CC
BERG 1930-05H - Wellbore #1 - Design #1	1,300.00	1,305.35	106.35	94.67	9.108	ES
BERG 1930-05H - Wellbore #1 - Design #1	1,700.00	1,702.54	117.28	102.84	8.124	SF
BERG 1930-06H - Wellbore #1 - Design #1	2,002.40	2,008.95	56.90	41.35	3.660	CC, ES
BERG 1930-06H - Wellbore #1 - Design #1	2,100.00	2,106.27	57.38	41.64	3.646	SF

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

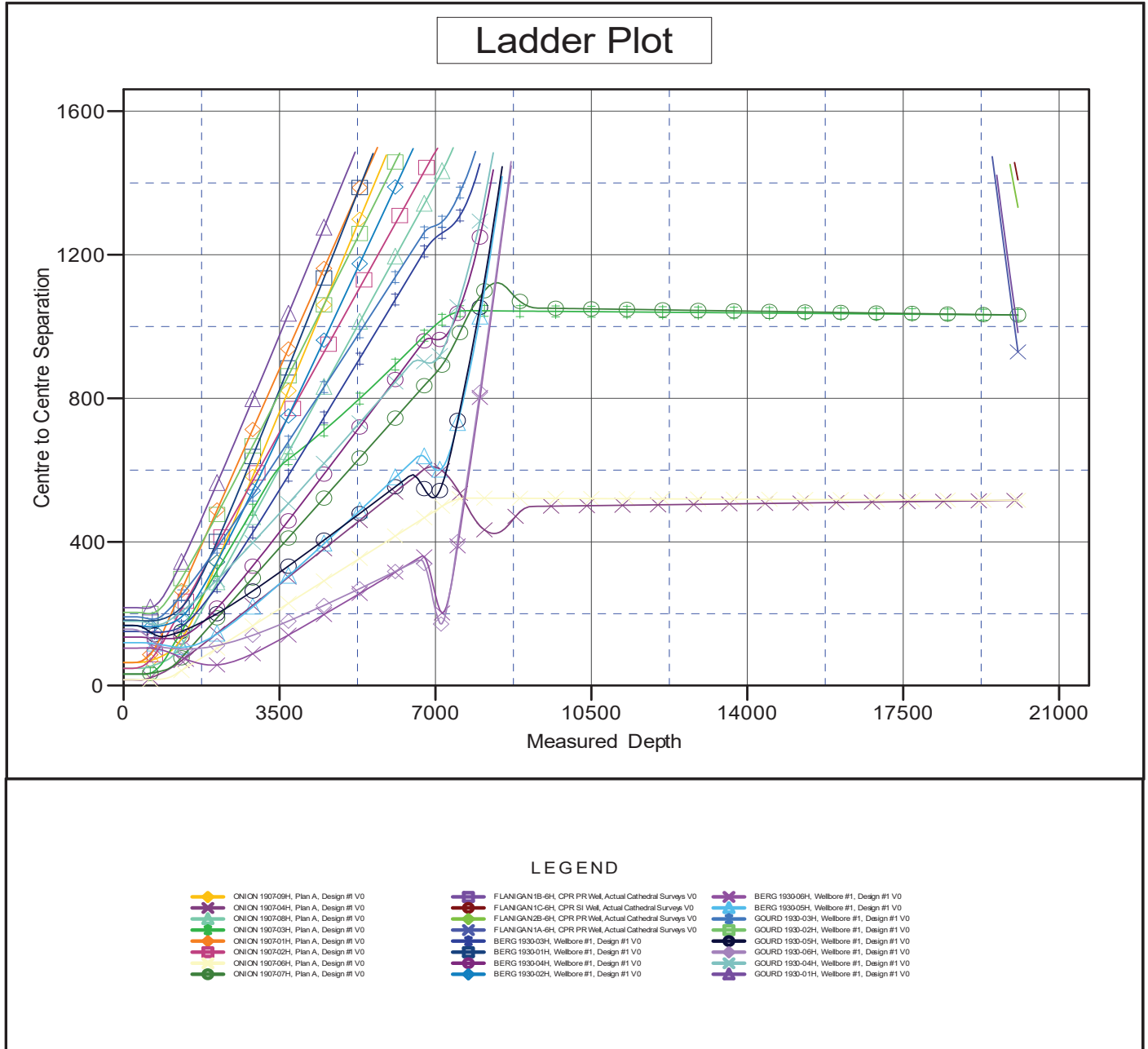
Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
1N-64W-19 GOURD 1930 PAD						
GOURD 1930-01H - Wellbore #1 - Design #1	519.00	521.79	215.49	207.48	26.900	CC, ES
GOURD 1930-01H - Wellbore #1 - Design #1	700.00	700.00	222.37	213.85	26.101	SF
GOURD 1930-02H - Wellbore #1 - Design #1	567.71	573.70	200.39	192.28	24.704	CC, ES
GOURD 1930-02H - Wellbore #1 - Design #1	800.00	804.09	211.26	202.40	23.854	SF
GOURD 1930-03H - Wellbore #1 - Design #1	646.14	656.97	185.13	176.84	22.311	CC, ES
GOURD 1930-03H - Wellbore #1 - Design #1	900.00	909.39	197.76	188.57	21.510	SF
GOURD 1930-04H - Wellbore #1 - Design #1	770.67	788.61	169.23	160.60	19.615	CC, ES
GOURD 1930-04H - Wellbore #1 - Design #1	1,700.00	1,708.26	247.03	233.63	18.437	SF
GOURD 1930-05H - Wellbore #1 - Design #1	855.79	876.59	136.32	127.40	15.284	CC, ES
GOURD 1930-05H - Wellbore #1 - Design #1	6,900.00	7,056.39	524.94	483.53	12.676	SF
GOURD 1930-06H - Wellbore #1 - Design #1	1,389.93	1,411.89	101.58	90.12	8.869	CC
GOURD 1930-06H - Wellbore #1 - Design #1	1,600.00	1,621.53	102.46	89.59	7.961	ES
GOURD 1930-06H - Wellbore #1 - Design #1	7,100.00	7,178.42	173.63	128.35	3.835	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	200.05	200.05	63.98	56.41	8.455	CC, ES
ONION 1907-01H - Plan A - Design #1	300.00	298.73	64.60	56.95	8.444	SF
ONION 1907-02H - Plan A - Design #1	200.00	200.00	47.99	40.43	6.342	CC, ES, SF
ONION 1907-03H - Plan A - Design #1	416.28	416.28	31.98	24.17	4.096	CC
ONION 1907-03H - Plan A - Design #1	503.00	502.99	31.98	24.02	4.018	ES
ONION 1907-03H - Plan A - Design #1	20,076.60	20,054.62	1,032.14	404.35	1.644	SF
ONION 1907-04H - Plan A - Design #1	380.92	381.03	15.02	7.27	1.937	CC
ONION 1907-04H - Plan A - Design #1	20,076.60	20,044.88	516.06	-108.64	0.826	Level 1, ES, SF
ONION 1907-06H - Plan A - Design #1	416.49	416.49	16.02	8.21	2.051	CC
ONION 1907-06H - Plan A - Design #1	20,077.54	20,156.34	516.08	-112.28	0.821	Level 1, ES, SF
ONION 1907-07H - Plan A - Design #1	410.28	410.28	32.01	24.21	4.104	CC, ES
ONION 1907-07H - Plan A - Design #1	20,077.54	20,255.95	1,032.17	408.01	1.654	SF
ONION 1907-08H - Plan A - Design #1	316.55	316.55	48.02	40.35	6.260	CC
ONION 1907-08H - Plan A - Design #1	400.00	399.65	48.02	40.24	6.171	ES, SF
ONION 1907-09H - Plan A - Design #1	313.43	313.43	64.01	56.34	8.348	CC
ONION 1907-09H - Plan A - Design #1	400.00	399.81	64.02	56.24	8.228	ES, SF

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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 1907-05H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.58°



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Offset Depths are relative to Offset Datum

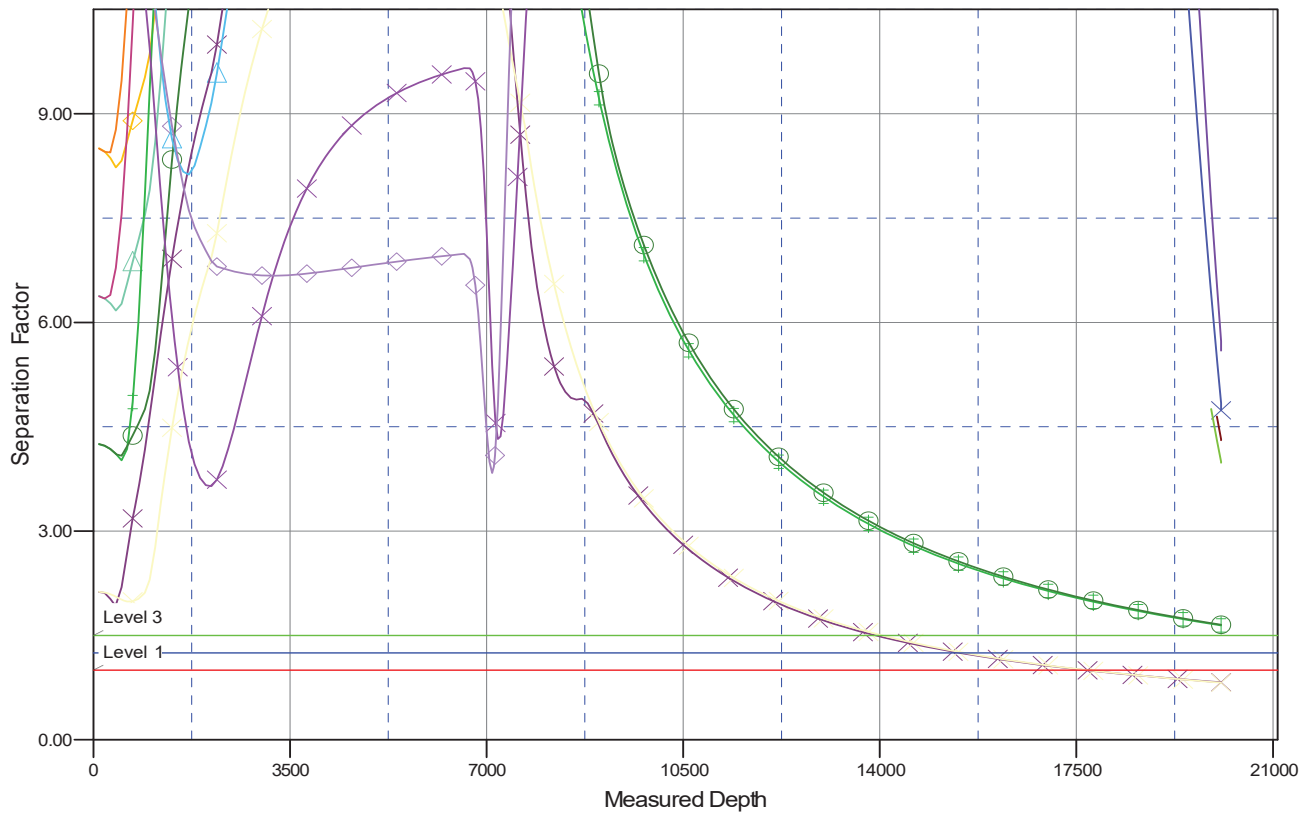
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Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Separation Factor Plot



LEGEND

ONION 190709H, Plan A, Design #1 V0
ONION 190709H, Plan A, Design #1 V0
ONION 190709H, Plan A, Design #1 V0
ONION 190703H, Plan A, Design #1 V0
ONION 190701H, Plan A, Design #1 V0
ONION 190702H, Plan A, Design #1 V0
ONION 190706H, Plan A, Design #1 V0
ONION 190707H, Plan A, Design #1 V0

FLANIGAN 1B-6H, OPR PR Well, Actual Cathedral Surveys V0
FLANIGAN 1C-6H, OPR SI Well, Actual Cathedral Surveys V0
FLANIGAN 2B-6H, OPR PR Well, Actual Cathedral Surveys V0
FLANIGAN 1A-6H, OPR PR Well, Actual Cathedral Surveys V0
BERG 193003H, Wellbore #1, Design #1 V0
BERG 193001H, Wellbore #1, Design #1 V0
BERG 193001H, Wellbore #1, Design #1 V0
BERG 193004H, Wellbore #1, Design #1 V0
BERG 193002H, Wellbore #1, Design #1 V0

BERG 193006H, Wellbore #1, Design #1 V0
BERG 193005H, Wellbore #1, Design #1 V0
GOURD 193003H, Wellbore #1, Design #1 V0
GOURD 193002H, Wellbore #1, Design #1 V0
GOURD 193005H, Wellbore #1, Design #1 V0
GOURD 193006H, Wellbore #1, Design #1 V0
GOURD 193004H, Wellbore #1, Design #1 V0
GOURD 193001H, Wellbore #1, Design #1 V0