

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**1N-64W-19 CHIVE & SHALLOT PAD**

**SHALLOT 1930-21H**

**Plan A**

**Design #1**

## **Anticollision Summary Report**

**19 May, 2023**

## Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well SHALLOT 1930-21H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 20' @ 5031.00usft (RIG)
<b>Reference Site:</b>	1N-64W-19 CHIVE & SHALLOT PAD	<b>MD Reference:</b>	RKB = 20' @ 5031.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SHALLOT 1930-21H	<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

<b>Reference</b>	Design #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum centre distance of 1,500.00usft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.45 Sigma	<b>Casing Method:</b>	Added to Error Values

<b>Survey Tool Program</b>	<b>Date</b>	5/15/2023			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.00	2,070.00	Design #1 (Plan A)	ISCWSA MWD	Fixed:v2:standard declination	
2,070.00	15,153.94	Design #1 (Plan A)	ISCWSA MWD	Fixed:v2:standard declination	

<b>Summary</b>						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
1N-64W-19 CHIVE & SHALLOT PAD						
CHIVE 2536-10H - Plan A - Design #1	200.00	200.00	176.00	168.43	23.254	CC, ES
CHIVE 2536-10H - Plan A - Design #1	300.00	294.41	177.57	169.92	23.219	SF
CHIVE 2536-11H - Plan A - Design #1	200.00	200.00	160.00	152.43	21.140	CC, ES
CHIVE 2536-11H - Plan A - Design #1	300.00	295.90	161.02	153.37	21.051	SF
CHIVE 2536-12H - Plan A - Design #1	207.92	207.92	144.00	136.42	19.012	CC, ES
CHIVE 2536-12H - Plan A - Design #1	300.00	297.29	144.55	136.90	18.894	SF
CHIVE 2536-13H - Plan A - Design #1	203.51	203.51	128.00	120.43	16.906	CC, ES
CHIVE 2536-13H - Plan A - Design #1	300.00	298.36	128.26	120.61	16.761	SF
CHIVE 2536-14H - Plan A - Design #1	208.33	208.33	112.00	104.42	14.787	CC
CHIVE 2536-14H - Plan A - Design #1	300.00	299.31	112.06	104.40	14.641	ES
CHIVE 2536-14H - Plan A - Design #1	330.25	328.51	112.38	104.70	14.623	SF
CHIVE 2536-15H - Plan A - Design #1	216.60	216.60	96.00	88.42	12.666	CC
CHIVE 2536-15H - Plan A - Design #1	300.00	299.80	96.00	88.35	12.541	ES
CHIVE 2536-15H - Plan A - Design #1	330.25	329.37	96.14	88.46	12.506	SF
CHIVE 2536-16H - Plan A - Design #1	300.25	300.25	80.00	72.35	10.451	CC
CHIVE 2536-16H - Plan A - Design #1	330.25	330.03	80.02	72.33	10.406	ES, SF
CHIVE 2536-17H - Plan A - Design #1	330.25	330.25	64.00	56.31	8.323	CC, ES, SF
SHALLOT 1930-18H - Plan A - Design #1	330.25	330.25	48.00	40.31	6.242	CC, ES
SHALLOT 1930-18H - Plan A - Design #1	400.00	399.64	48.49	40.71	6.230	SF
SHALLOT 1930-19H - Plan A - Design #1	330.25	330.25	32.00	24.31	4.161	CC, ES
SHALLOT 1930-19H - Plan A - Design #1	400.00	399.88	32.39	24.61	4.161	SF
SHALLOT 1930-20H - Plan A - Design #1	330.25	330.25	16.00	8.31	2.081	CC, ES, SF
SHALLOT 1930-22H - Plan A - Design #1	300.00	300.00	16.00	8.35	2.090	CC, ES, SF
SHALLOT 1930-23H - Plan A - Design #1	203.40	203.40	32.00	24.43	4.227	CC, ES
SHALLOT 1930-23H - Plan A - Design #1	300.00	299.75	32.11	24.46	4.195	SF
SHALLOT 1930-24H - Plan A - Design #1	200.00	200.00	48.00	40.43	6.342	CC, ES, 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 Sur						Out of range

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<b>Reference Site:</b>	1N-64W-19 CHIVE & SHALLOT PAD	<b>MD Reference:</b>	RKB = 20' @ 5031.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SHALLOT 1930-21H	<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

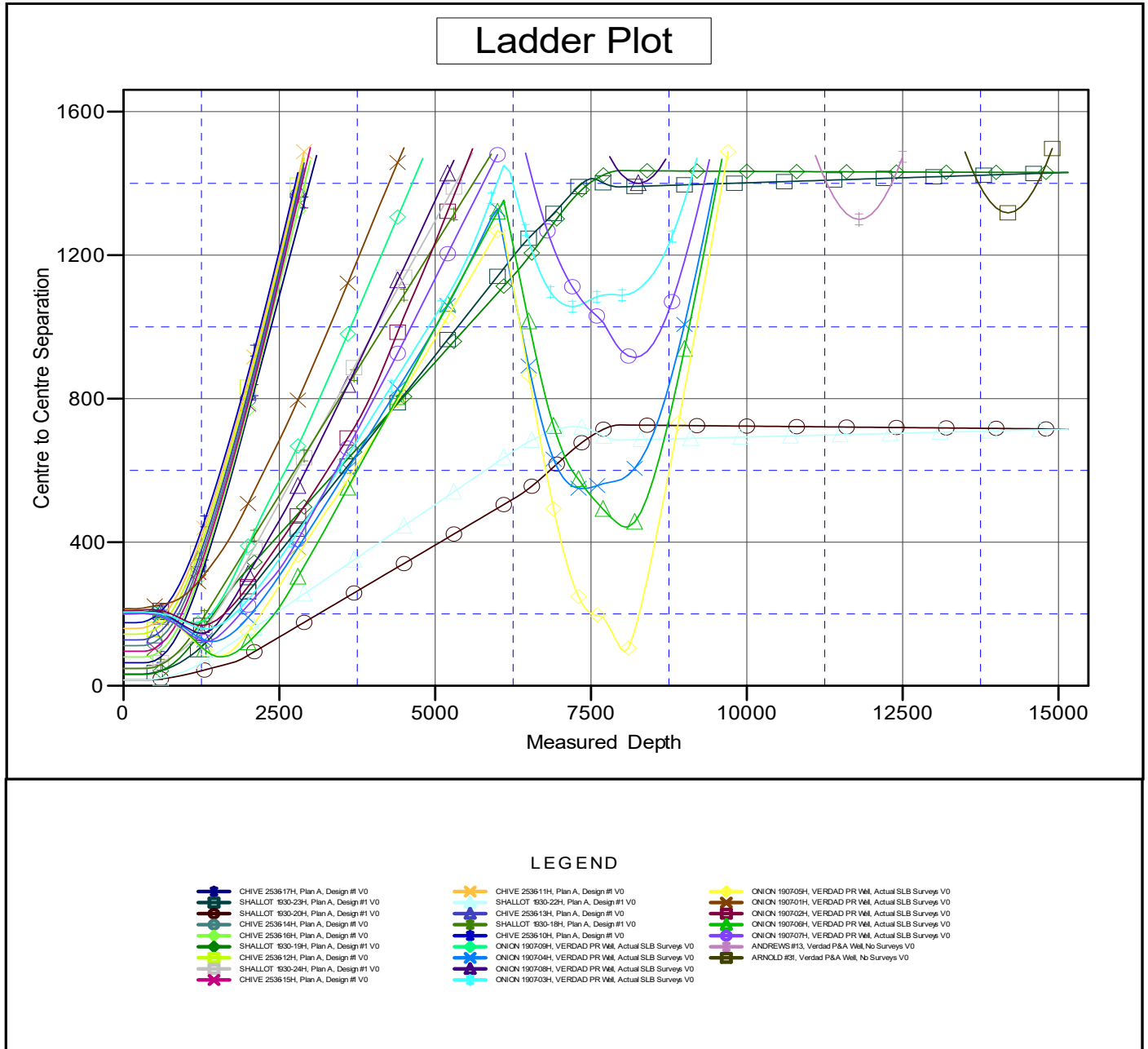
Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
1N-64W-19 ONION 1907 PAD						
ONION 1907-01H - VERDAD PR Well - Actual SLB Surv	188.05	189.06	214.67	207.12	28.411	CC, ES
ONION 1907-01H - VERDAD PR Well - Actual SLB Surv	900.00	864.56	242.90	233.77	26.618	SF
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	1,248.19	1,229.40	168.28	157.27	15.288	CC, ES
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	1,500.00	1,470.09	183.42	170.68	14.396	SF
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	1,319.50	1,297.10	158.41	146.89	13.753	CC, ES
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	1,500.00	1,471.29	165.68	152.80	12.866	SF
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	1,428.34	1,404.00	123.38	111.03	9.987	CC, ES
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	1,600.00	1,570.28	130.55	116.91	9.577	SF
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	1,547.99	1,524.40	83.40	70.07	6.260	CC
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	8,039.12	7,113.68	95.70	50.93	2.138	ES, SF
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	1,551.46	1,520.29	80.43	68.29	6.627	CC
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	1,600.00	1,568.47	80.88	68.27	6.415	ES
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	1,800.00	1,764.53	93.18	77.96	6.122	SF
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	1,337.62	1,302.65	123.39	112.45	11.283	CC, ES
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	1,400.00	1,361.07	124.87	113.56	11.038	SF
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	1,253.98	1,216.01	145.63	135.08	13.796	CC, ES
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	1,400.00	1,348.12	154.96	143.54	13.568	SF
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	1,141.81	1,104.08	174.53	164.32	17.094	CC
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	1,156.75	1,117.80	174.57	164.29	16.980	ES
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	1,300.00	1,248.00	182.65	171.59	16.514	SF
1N-64W-30 Offsets						
ANDREWS #13 - Verdad P&A Well - No Surveys	11,803.74	6,922.00	1,299.61	962.42	3.854	CC, ES
ANDREWS #13 - Verdad P&A Well - No Surveys	11,900.00	6,922.00	1,303.17	963.02	3.831	SF
ARNOLD #31 - Verdad P&A Well - No Surveys	14,189.82	6,940.00	1,318.20	925.68	3.358	CC
ARNOLD #31 - Verdad P&A Well - No Surveys	14,200.00	6,940.00	1,318.24	925.60	3.357	ES, SF
1N-64W-31 Offsets						
UPRR TIPPETT #1 - Rocky Mtn P&A Well - No Surveys						Out of range

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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 = 20' @ 5031.00usft (RIG)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: SHALLOT 1930-21H  
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 = 20' @ 5031.00usft (RIG)

Offset Depths are relative to Offset Datum

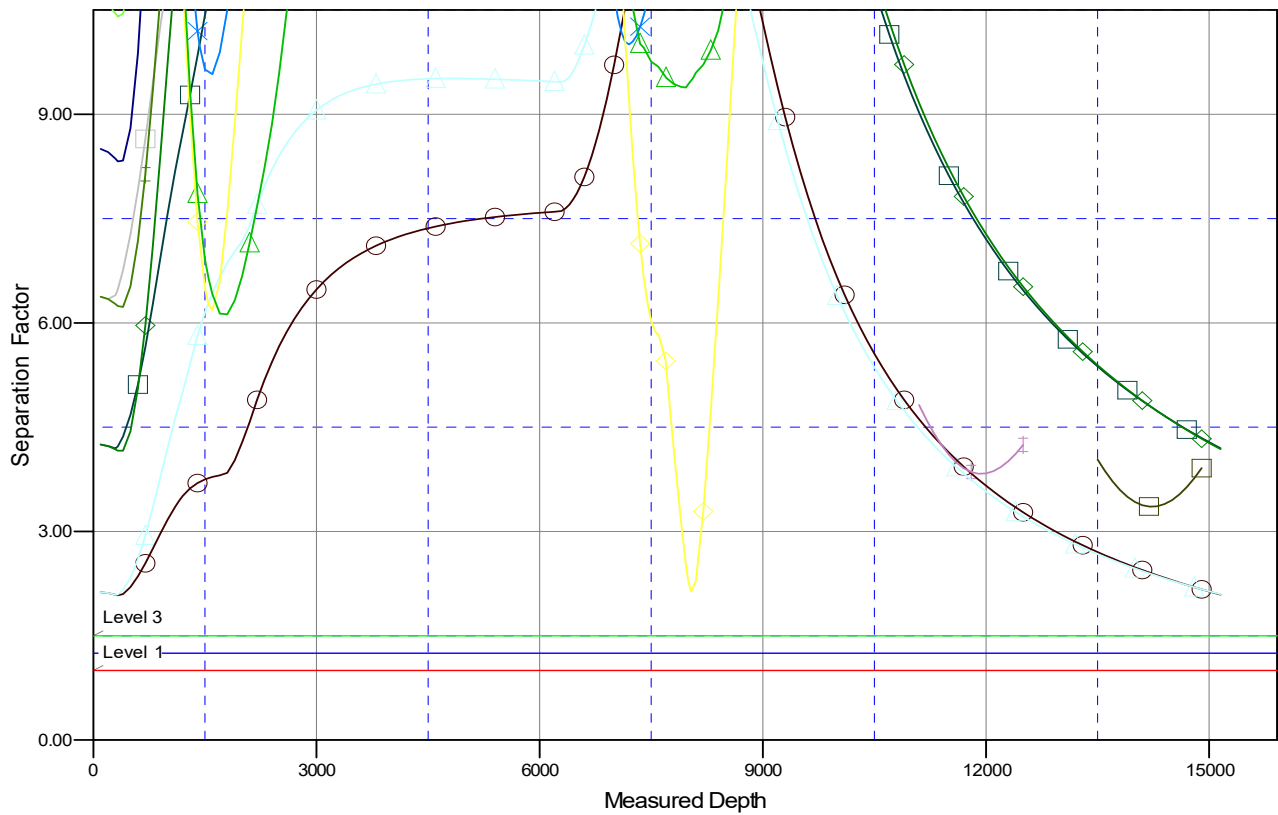
Central Meridian is -105.500000

Coordinates are relative to: SHALLOT 1930-21H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

### Separation Factor Plot



#### LEGEND

CHIVE 253617H, Plan A, Design #1 V0	CHIVE 253611H, Plan A, Design #1 V0	ONION 190709H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-23H, Plan A, Design #1 V0	SHALLOT 1930-22H, Plan A, Design #1 V0	ONION 190701H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-20H, Plan A, Design #1 V0	CHIVE 253613H, Plan A, Design #1 V0	ONION 190702H, VERDAD PR Well, Actual SLB Survey V0
CHIVE 253614H, Plan A, Design #1 V0	SHALLOT 1930-18H, Plan A, Design #1 V0	ONION 190706H, VERDAD PR Well, Actual SLB Survey V0
CHIVE 253616H, Plan A, Design #1 V0	CHIVE 253610H, Plan A, Design #1 V0	ONION 190707H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-19H, Plan A, Design #1 V0	ONION 190709H, VERDAD PR Well, Actual SLB Survey V0	ONION 190708H, VERDAD PR Well, Actual SLB Survey V0
CHIVE 253612H, Plan A, Design #1 V0	ONION 190704H, VERDAD PR Well, Actual SLB Survey V0	ANDREWS #13, Verdad P&A Well, No Surveys V0
SHALLOT 1930-24H, Plan A, Design #1 V0	ONION 190708H, VERDAD PR Well, Actual SLB Survey V0	ARVOLD #51, Verdad P&A Well, No Surveys V0
CHIVE 253615H, Plan A, Design #1 V0	ONION 190703H, VERDAD PR Well, Actual SLB Survey V0	