

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

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

**SHALLOT 1930-23H**

**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 1930-23H
<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 1930-23H	<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	15,478.44	Design #1 (Plan A)	ISCWSA MWD	Fixed:v2:standard declination

<b>Summary</b>						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
1N-64W-19 CHIVE & SHALLOT PAD						
CHIVE 2536-10H - Plan A - Design #1	200.00	200.00	208.00	200.43	27.482	CC, ES
CHIVE 2536-10H - Plan A - Design #1	271.50	266.85	208.79	201.17	27.396	SF
CHIVE 2536-11H - Plan A - Design #1	200.00	200.00	192.00	184.43	25.368	CC, ES
CHIVE 2536-11H - Plan A - Design #1	271.50	268.37	192.42	184.80	25.244	SF
CHIVE 2536-12H - Plan A - Design #1	200.93	200.93	176.00	168.43	23.252	CC, ES
CHIVE 2536-12H - Plan A - Design #1	300.00	296.72	176.66	169.01	23.092	SF
CHIVE 2536-13H - Plan A - Design #1	206.87	206.87	160.00	152.42	21.127	CC
CHIVE 2536-13H - Plan A - Design #1	271.50	270.88	160.02	152.40	20.986	ES
CHIVE 2536-13H - Plan A - Design #1	300.00	297.96	160.37	152.72	20.958	SF
CHIVE 2536-14H - Plan A - Design #1	271.50	271.50	144.00	136.37	18.882	CC, ES
CHIVE 2536-14H - Plan A - Design #1	300.00	299.12	144.17	136.52	18.837	SF
CHIVE 2536-15H - Plan A - Design #1	271.50	271.50	128.01	120.38	16.786	CC, ES
CHIVE 2536-15H - Plan A - Design #1	300.00	299.80	128.12	120.46	16.737	SF
CHIVE 2536-16H - Plan A - Design #1	271.50	271.50	112.01	104.38	14.687	CC, ES
CHIVE 2536-16H - Plan A - Design #1	300.00	300.00	112.12	104.46	14.647	SF
CHIVE 2536-17H - Plan A - Design #1	271.50	271.50	96.00	88.38	12.589	CC, ES
CHIVE 2536-17H - Plan A - Design #1	300.00	300.00	96.12	88.46	12.556	SF
SHALLOT 1930-18H - Plan A - Design #1	271.50	271.50	80.00	72.38	10.491	CC, ES
SHALLOT 1930-18H - Plan A - Design #1	300.00	300.00	80.12	72.46	10.466	SF
SHALLOT 1930-19H - Plan A - Design #1	271.50	271.50	64.00	56.38	8.393	CC, ES
SHALLOT 1930-19H - Plan A - Design #1	300.00	300.00	64.12	56.46	8.376	SF
SHALLOT 1930-20H - Plan A - Design #1	271.50	271.50	48.00	40.38	6.295	CC, ES
SHALLOT 1930-20H - Plan A - Design #1	300.00	300.00	48.11	40.46	6.286	SF
SHALLOT 1930-21H - Plan A - Design #1	271.50	271.50	32.00	24.38	4.196	CC, ES
SHALLOT 1930-21H - Plan A - Design #1	300.00	300.00	32.11	24.46	4.195	SF
SHALLOT 1930-22H - Plan A - Design #1	271.50	271.50	16.00	8.37	2.098	CC, ES
SHALLOT 1930-22H - Plan A - Design #1	15,478.44	15,286.95	715.36	374.24	2.097	SF
SHALLOT 1930-24H - Plan A - Design #1	200.00	200.00	16.00	8.43	2.114	CC, ES
SHALLOT 1930-24H - Plan A - Design #1	15,479.23	15,730.28	715.36	374.71	2.100	SF
1N-64W-19 Offsets						
STEVENS #1 - KPK P/A Well - No Surveys	8,616.16	6,911.00	529.98	256.76	1.940	CC, ES, SF
WEIMER #1 - Petro-American Energy D/A Well - No Sur	7,350.00	6,704.63	639.83	377.27	2.437	SF
WEIMER #1 - Petro-American Energy D/A Well - No Sur	7,369.42	6,717.48	639.55	377.20	2.438	CC, ES

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<b>Reference Site:</b>	1N-64W-19 CHIVE & SHALLOT PAD	<b>MD Reference:</b>	RKB = 20' @ 5031.00usft (RIG)
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<b>Reference Well:</b>	SHALLOT 1930-23H	<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

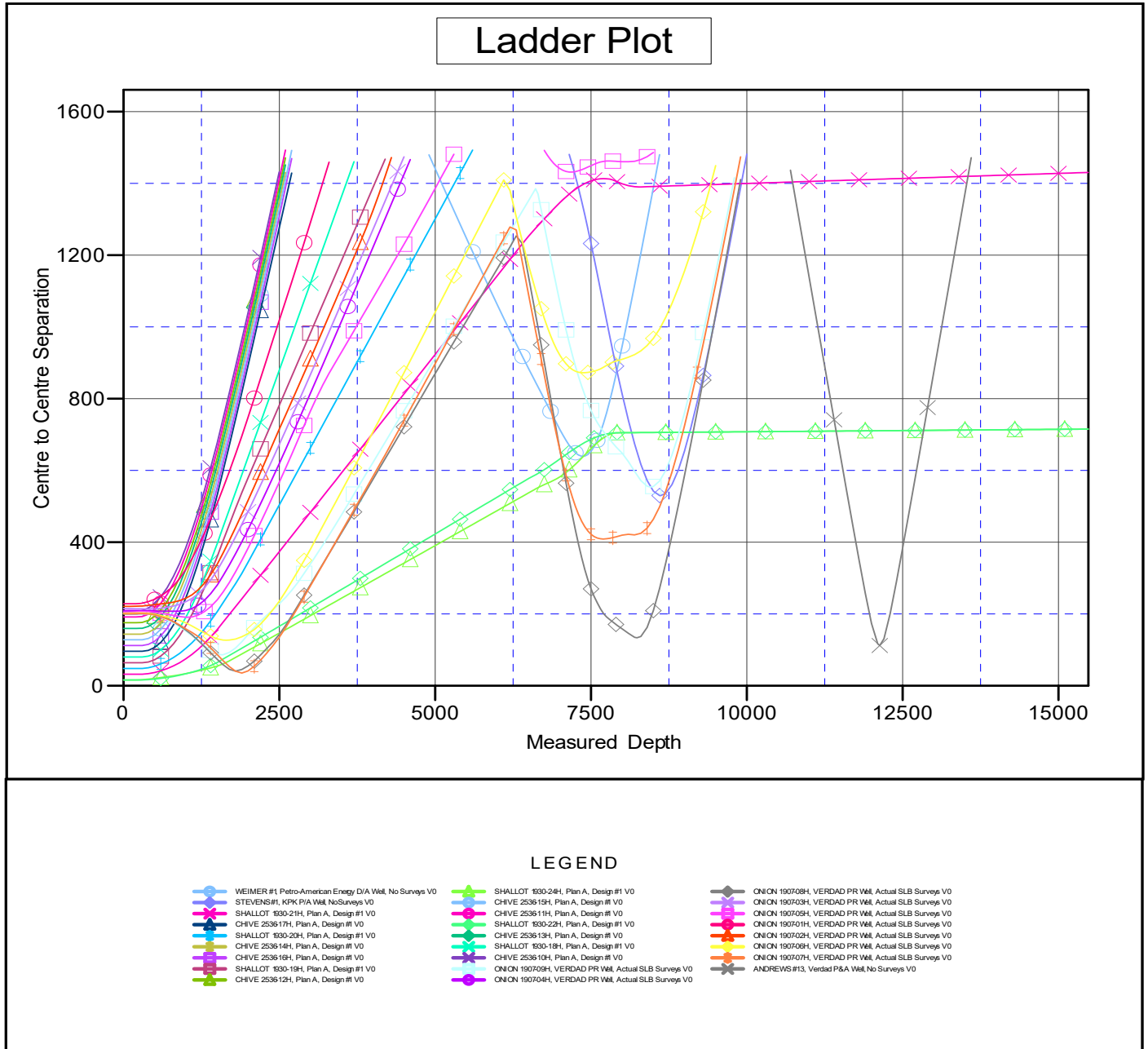
Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
1N-64W-19 ONION 1907 PAD						
ONION 1907-01H - VERDAD PR Well - Actual SLB Surv	181.75	182.75	228.43	220.88	30.244	CC, ES
ONION 1907-01H - VERDAD PR Well - Actual SLB Surv	300.00	293.79	230.24	222.61	30.142	SF
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	221.32			
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	1,200.00	1,177.78	267.31	256.51	24.765	SF
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	427.25	425.07	213.83	206.04	27.443	CC, ES
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	1,200.00	1,174.65	256.27	245.42	23.609	SF
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	700.00	692.42	207.61	199.24	24.799	CC
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	822.02	814.12	207.66	198.86	23.601	ES
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	1,300.00	1,272.69	238.29	226.67	20.509	SF
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	1,024.32	1,015.88	191.06	181.26	19.498	CC, ES
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	1,300.00	1,279.01	206.49	194.80	17.667	SF
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	1,645.68	1,632.84	126.95	110.78	7.850	CC
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	1,700.00	1,687.04	127.22	110.67	7.689	ES
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	1,800.00	1,784.24	130.16	113.15	7.652	SF
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	1,898.56	1,879.08	35.49	17.38	1.960	CC, ES, SF
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	1,794.98	1,766.01	40.92	27.05	2.950	CC
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	1,800.00	1,770.94	40.93	26.99	2.937	ES
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	8,200.00	7,483.20	135.15	73.61	2.196	SF
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	1,578.31	1,541.96	86.37	73.76	6.850	CC, ES
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	1,800.00	1,754.01	105.36	89.46	6.629	SF
1N-64W-30 Offsets						
ANDREWS #13 - Verdad P&A Well - No Surveys	12,100.00	6,922.00	116.97	-226.81	0.340	Level 1, ES
ANDREWS #13 - Verdad P&A Well - No Surveys	12,132.66	6,922.00	112.32	-225.54	0.332	Level 1, CC, SF
ARNOLD #31 - Verdad P&A Well - No Surveys						Out of range
1N-64W-31 Offsets						
UPRR TIPPETT #1 - Rocky Mtn P&A Well - No Surveys						Out of range

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<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SHALLOT 1930-23H	<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 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 1930-23H  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.58°



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<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well SHALLOT 1930-23H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 20' @ 5031.00usft (RIG)
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<b>Reference Well:</b>	SHALLOT 1930-23H	<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 Depths are relative to RKB = 20' @ 5031.00usft (RIG)

Offset Depths are relative to Offset Datum

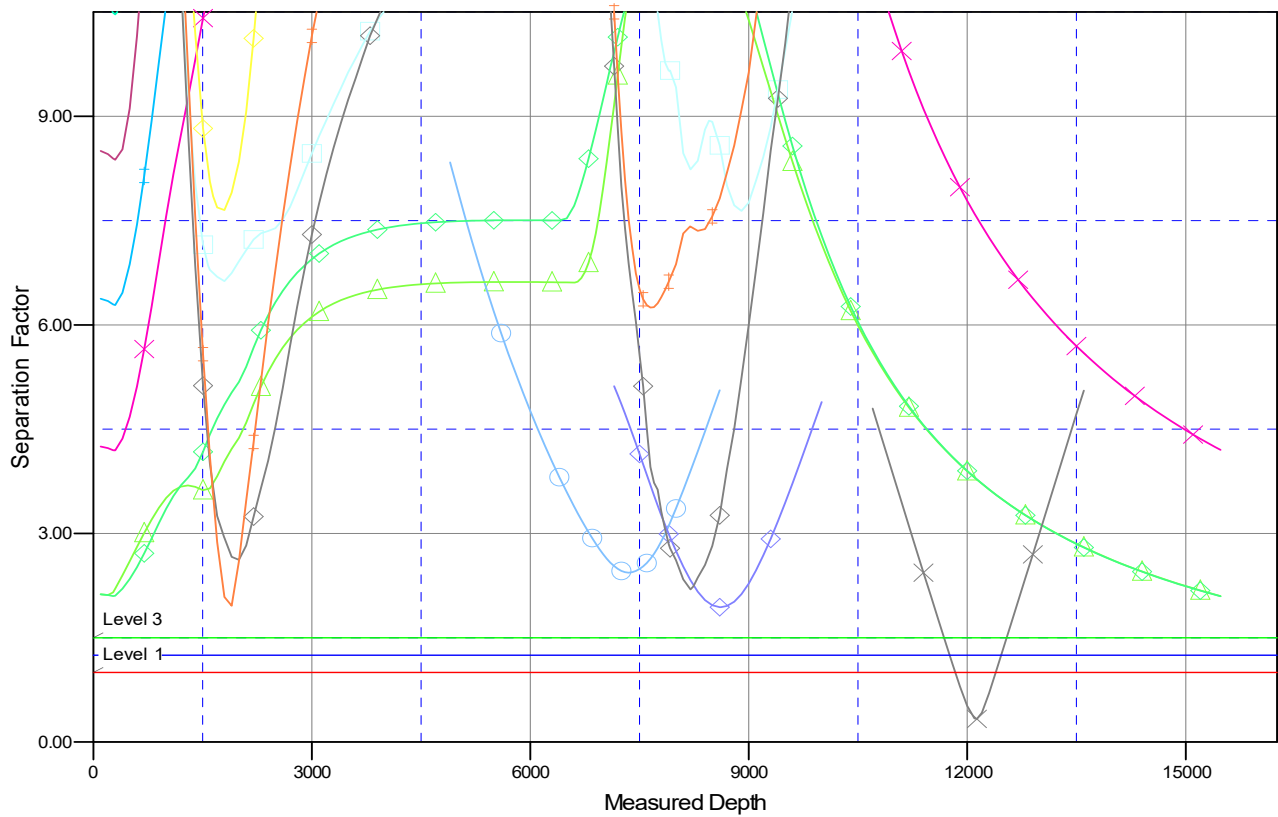
Central Meridian is -105.500000

Coordinates are relative to: SHALLOT 1930-23H

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	SHALLOT 1930-24H, Plan A, Design #1 V0	ONION 190708H, VERDAD PR Well, Actual SLB Survey V0
STEVENS#1, KPK P/A Well, No Surveys V0	CHIVE 253615H, Plan A, Design #1 V0	ONION 190703H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-21H, Plan A, Design #1 V0	CHIVE 253611H, Plan A, Design #1 V0	ONION 190705H, VERDAD PR Well, Actual SLB Survey V0
CHIVE 253617H, 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 1930-19H, 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	ANDREWS #13, Verdad P&A Well, No Surveys V0
CHIVE 253612H, Plan A, Design #1 V0	ONION 190704H, VERDAD PR Well, Actual SLB Survey V0	