

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

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

**CHIVE 2536-13H**

**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 CHIVE 2536-13H
<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>	CHIVE 2536-13H	<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	18,846.63	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	48.00	40.43	6.342	CC, ES
CHIVE 2536-10H - Plan A - Design #1	2,400.00	2,350.14	117.89	86.08	3.706	SF
CHIVE 2536-11H - Plan A - Design #1	200.00	200.00	32.00	24.43	4.228	CC, ES
CHIVE 2536-11H - Plan A - Design #1	18,847.37	19,587.58	1,231.84	668.70	2.187	SF
CHIVE 2536-12H - Plan A - Design #1	200.92	200.92	16.00	8.43	2.114	CC, ES
CHIVE 2536-12H - Plan A - Design #1	18,847.37	19,228.09	616.60	59.90	1.108	Level 2, SF
CHIVE 2536-14H - Plan A - Design #1	259.00	259.00	16.00	8.39	2.101	CC, ES
CHIVE 2536-14H - Plan A - Design #1	18,843.47	18,496.06	616.61	60.24	1.108	Level 2, SF
CHIVE 2536-15H - Plan A - Design #1	259.00	259.00	31.99	24.38	4.202	CC, ES
CHIVE 2536-15H - Plan A - Design #1	18,841.24	18,182.91	1,233.21	676.95	2.217	SF
CHIVE 2536-16H - Plan A - Design #1	259.00	259.00	47.99	40.38	6.303	CC, ES
CHIVE 2536-16H - Plan A - Design #1	1,900.00	1,923.34	132.39	109.05	5.672	SF
CHIVE 2536-17H - Plan A - Design #1	259.00	259.00	63.99	56.38	8.404	CC, ES
CHIVE 2536-17H - Plan A - Design #1	300.00	300.00	64.27	56.61	8.397	SF
SHALLOT 1930-18H - Plan A - Design #1	259.00	259.00	79.99	72.38	10.506	CC, ES
SHALLOT 1930-18H - Plan A - Design #1	300.00	300.00	80.27	72.61	10.488	SF
SHALLOT 1930-19H - Plan A - Design #1	259.00	259.00	95.99	88.38	12.607	CC, ES
SHALLOT 1930-19H - Plan A - Design #1	300.00	300.00	96.27	88.62	12.579	SF
SHALLOT 1930-20H - Plan A - Design #1	259.00	259.00	112.00	104.38	14.709	CC, ES
SHALLOT 1930-20H - Plan A - Design #1	300.00	300.00	112.27	104.62	14.669	SF
SHALLOT 1930-21H - Plan A - Design #1	259.00	259.00	128.00	120.38	16.810	CC, ES
SHALLOT 1930-21H - Plan A - Design #1	300.00	300.00	128.27	120.62	16.760	SF
SHALLOT 1930-22H - Plan A - Design #1	259.00	259.00	144.00	136.38	18.911	CC, ES
SHALLOT 1930-22H - Plan A - Design #1	300.00	300.00	144.27	136.62	18.851	SF
SHALLOT 1930-23H - Plan A - Design #1	259.00	259.00	160.00	152.38	21.013	CC, ES
SHALLOT 1930-23H - Plan A - Design #1	300.00	298.79	160.38	152.73	20.958	SF
SHALLOT 1930-24H - Plan A - Design #1	200.00	200.00	176.00	168.43	23.254	CC, ES
SHALLOT 1930-24H - Plan A - Design #1	259.00	257.01	176.22	168.61	23.148	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 Sur						Out of range

# Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well CHIVE 2536-13H
<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>	CHIVE 2536-13H	<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	291.14	293.48	204.93	197.29	26.842	CC, ES
ONION 1907-01H - VERDAD PR Well - Actual SLB Surv	1,400.00	1,382.82	331.96	318.23	24.174	SF
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	210.39			
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	400.00	399.01	214.23	206.48	27.642	SF
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	215.90			
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	400.00	399.07	219.26	211.52	28.302	SF
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	222.38			
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	400.00	398.83	226.73	218.99	29.291	SF
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	229.83			
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	400.00	400.79	233.77	226.03	30.200	SF
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	238.13			
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	400.00	399.13	242.96	235.22	31.396	SF
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	247.18			
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	400.00	397.02	250.65	242.91	32.395	SF
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	256.92			
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	200.00	200.82	256.94	249.38	34.005	ES
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	259.00	257.00	257.31	249.72	33.893	SF
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	187.90	188.90	267.21	259.66	35.368	CC, ES
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	300.00	296.43	268.38	260.75	35.148	SF
1N-65W-12 SAFI 1224 PAD						
SAFI 1224-02H - Verdad PR Well - Actual SLB Surveys						Out of range
SAFI 1224-04H - Verdad PR Well - Actual SLB Surveys	8,773.40	18,174.00	1,235.24	877.74	3.455	CC
SAFI 1224-04H - Verdad PR Well - Actual SLB Surveys	8,800.00	18,174.00	1,235.94	877.18	3.445	ES
SAFI 1224-04H - Verdad PR Well - Actual SLB Surveys	8,850.00	18,174.00	1,241.02	880.42	3.442	SF
SAFI 1224-06H - Verdad PR Well - Actual SLB Surveys	8,600.00	18,015.00	564.91	265.29	1.885	ES, SF
SAFI 1224-06H - Verdad PR Well - Actual SLB Surveys	8,600.77	18,015.00	564.91	265.32	1.886	CC
SAFI 1224-08H - Verdad PR Well - Actual SLB Surveys	8,397.31	17,961.00	593.40	385.45	2.854	CC
SAFI 1224-08H - Verdad PR Well - Actual SLB Surveys	8,450.00	17,961.00	596.71	378.93	2.740	ES
SAFI 1224-08H - Verdad PR Well - Actual SLB Surveys	8,550.00	17,961.00	620.54	388.96	2.680	SF
SAFI 1224-10H - Verdad PR Well - Actual SLB Surveys						Out of range
SAFI 1224-12H - Verdad PR Well - Actual SLB Surveys						Out of range
SAFI 1224-14H - Verdad PR Well - Actual SLB Surveys						Out of range
1N-65W-24 Offsets						
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	7,116.42	5,769.33	464.78	344.99	3.880	CC, ES
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	7,200.00	5,831.79	468.17	347.15	3.868	SF
1N-65W-25 Offsets						
HSR OLIPHANT #3-25 - Mountain Petroleum P&A Well -	9,700.00	6,957.00	75.84	-266.13	0.222	Level 1, ES, SF
HSR OLIPHANT #3-25 - Mountain Petroleum P&A Well -	9,715.33	6,957.00	74.28	-248.05	0.230	Level 1, CC
HSR-AMEN #11-25 - KMG P&A Well - No Surveys	11,373.85	6,959.00	471.67	116.34	1.327	Level 3, CC
HSR-AMEN #11-25 - KMG P&A Well - No Surveys	11,500.00	6,959.00	488.25	106.76	1.280	Level 3, ES, SF
HSR-HAFFNER #2-25 - HSR P&A Well - No Surveys	7,273.36	5,871.34	1,100.17	787.74	3.521	CC
HSR-HAFFNER #2-25 - HSR P&A Well - No Surveys	7,400.00	5,966.33	1,103.35	785.45	3.471	ES
HSR-HAFFNER #2-25 - HSR P&A Well - No Surveys	7,600.00	6,116.35	1,121.17	795.82	3.446	SF

## Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well CHIVE 2536-13H
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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>	CHIVE 2536-13H	<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-65W-36 Offsets						
ACCO TERRA STATE #18-36 - Kerr McGee PR Well - N	15,651.92	6,989.00	1,236.75	785.59	2.741	CC
ACCO TERRA STATE #18-36 - Kerr McGee PR Well - N	15,800.00	6,989.00	1,245.59	780.90	2.680	ES
ACCO TERRA STATE #18-36 - Kerr McGee PR Well - N	15,900.00	6,989.00	1,261.39	789.27	2.672	SF
ACCO-TERRA-STATE ET AL #41 - Kerr McGee PR Well	15,000.00	6,963.00	1,497.34	1,054.96	3.385	SF
ACCO-TERRA-STATE ET AL #41 - Kerr McGee PR Well	15,100.00	6,963.00	1,493.04	1,054.41	3.404	ES
ACCO-TERRA-STATE ET AL #41 - Kerr McGee PR Well	15,114.35	6,963.00	1,492.97	1,054.94	3.408	CC
RUEBEL ET AL #36-1 - KPK PR Well - No Surveys						Out of range
STATE #36-2 - KPK P&A Well - No Surveys	17,546.40	7,007.00	1,369.84	874.70	2.767	CC
STATE #36-2 - KPK P&A Well - No Surveys	17,700.00	7,007.00	1,378.42	870.62	2.714	ES
STATE #36-2 - KPK P&A Well - No Surveys	17,800.00	7,007.00	1,393.12	878.77	2.709	SF

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<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	CHIVE 2536-13H	<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

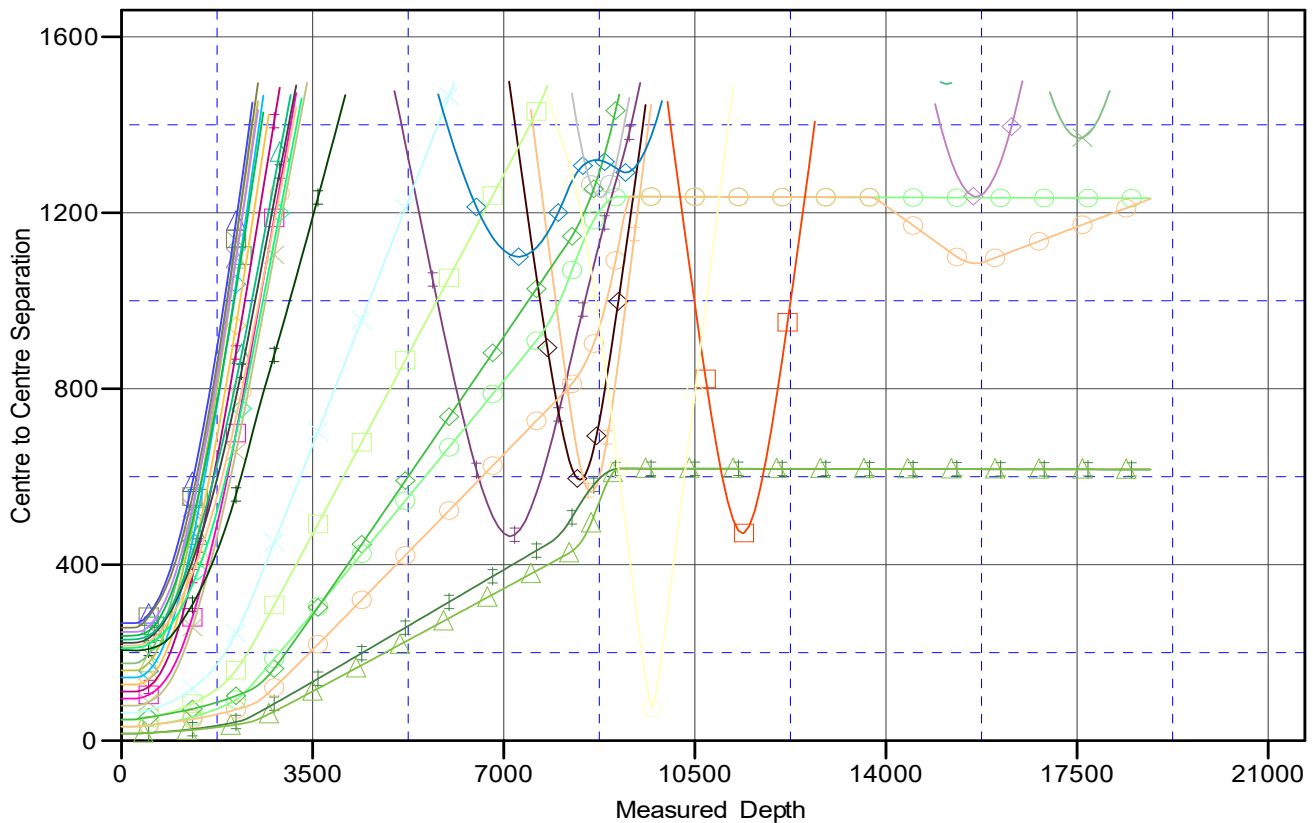
Central Meridian is -105.500000

Coordinates are relative to: CHIVE 2536-13H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

### Ladder Plot



#### LEGEND

Meach01N-64W-24-2N, Verdad SI Well, Actual Ensign Surveys V0	SHALLOT 1930-24H, Plan A, Design #1 V0	ONION 190705H, VERDAD PR Well, Actual SLB Surveys V0
SAFI 122404H, Verdad PR Well, Actual SLB Surveys V0	SHALLOT 1930-19H, Plan A, Design #1 V0	ONION 190701H, VERDAD PR Well, Actual SLB Surveys V0
SAFI 122408H, Verdad PR Well, Actual SLB Surveys V0	CHIVE 253615H, Plan A, Design #1 V0	ONION 190702H, VERDAD PR Well, Actual SLB Surveys V0
SAFI 122409H, Verdad PR Well, Actual SLB Surveys V0	CHIVE 253611H, Plan A, Design #1 V0	ONION 190706H, VERDAD PR Well, Actual SLB Surveys V0
SHALLOT 1930-21H, Plan A, Design #1 V0	SHALLOT 1930-22H, Plan A, Design #1 V0	ONION 190707H, VERDAD PR Well, Actual SLB Surveys V0
CHIVE 253617H, Plan A, Design #1 V0	SHALLOT 1930-18H, Plan A, Design #1 V0	ACCO TERRA STATE #18-36, Kar McGee PR Well, No Surveys V0
SHALLOT 1930-23H, Plan A, Design #1 V0	CHIVE 253610H, Plan A, Design #1 V0	STATE #62, RPK P&A Well, No Surveys V0
SHALLOT 1930-20H, Plan A, Design #1 V0	ONION 190709H, VERDAD PR Well, Actual SLB Surveys V0	ACCO TERRA STATE ET AL #41, Kar McGee PR Well, No Surveys V0
CHIVE 253616H, Plan A, Design #1 V0	ONION 190704H, VERDAD PR Well, Actual SLB Surveys V0	HSR-AMEN#11-25, KMG P&A Well, No Surveys V0
CHIVE 253612H, Plan A, Design #1 V0	ONION 190708H, VERDAD PR Well, Actual SLB Surveys V0	HSR-HAFNER #2-25, HSR P&A Well, No Surveys V0
	ONION 190703H, VERDAD PR Well, Actual SLB Surveys V0	HSR OLIPHANT #3-25, Mountain Petroleum P&A Well, No Surveys V0

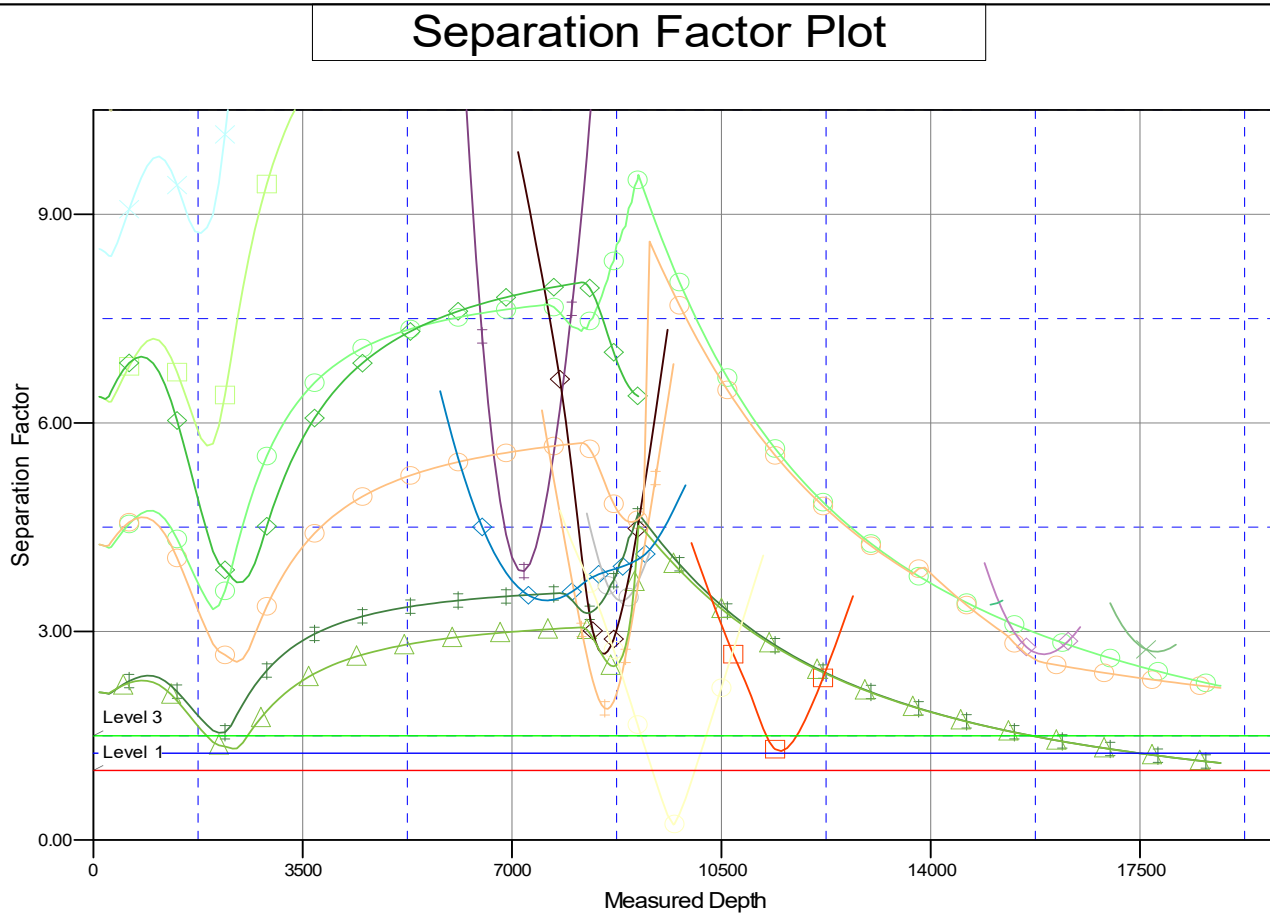
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<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well CHIVE 2536-13H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 20' @ 5031.00usft (RIG)
<b>Reference Site:</b>	1N-64W-19 CHIVE & SHALLOT PAD	<b>MD Reference:</b>	RKB = 20' @ 5031.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	CHIVE 2536-13H	<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

































Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°



## LEGEND

	MEEL01142049-24, Verded S/L Wk, Actual Envs Surveys VO		SHALL0T 930-24H, Plan A, Design #1 VO		ONICN 190705H, VERDAD PR Wk, Actual S/LB Surveys VO
	SAFI 122404H, Verded PR Wk, Actual S/LB Surveys VO		SHALL0T 930-19H, Plan A, Design #1 VO		ONICN 190701H, VERDAD PR Wk, Actual S/LB Surveys VO
	SAFI 122404H, Verded PR Wk, Actual S/LB Surveys VO		CHIVE 2536-15H, Plan A, Design #1 VO		ONICN 190702H, VERDAD PR Wk, Actual S/LB Surveys VO
	SAFI 122404H, Verded PR Wk, Actual S/LB Surveys VO		CHIVE 2536-11H, Plan A, Design #1 VO		ONICN 190706H, VERDAD PR Wk, Actual S/LB Surveys VO
	SHALL0T 930-21H, Plan A, Design #1 VO		SHALL0T 930-22H, Plan A, Design #1 VO		ONICN 190707H, VERDAD PR Wk, Actual S/LB Surveys VO
	CHIVE 2536-17H, Plan A, Design #1 VO		SHALL0T 930-18H, Plan A, Design #1 VO		ACCO TERRA STATE #18-36, Kar M-Coee PR Wk, No Surveys VO
	SHALL0T 930-23H, Plan A, Design #1 VO		CHIVE 2536-16H, Plan A, Design #1 VO		STATE #652, KPR P&A Wk, No Surveys VO
	SHALL0T 930-23H, Plan A, Design #1 VO		ONICN 190704H, VERDAD PR Wk, Actual S/LB Surveys VO		ACCO TERRA STATE #18-36, Kar M-Coee PR Wk, No Surveys VO
	CHIVE 2536-16H, Plan A, Design #1 VO		ONICN 190704H, VERDAD PR Wk, Actual S/LB Surveys VO		HSR-AMENEN #18-36, KPR P&A Wk, No Surveys VO
	CHIVE 2536-16H, Plan A, Design #1 VO		ONICN 190705H, VERDAD PR Wk, Actual S/LB Surveys VO		HSR-HAFNER #25, HSR P&A Wk, No Surveys VO
	CHIVE 2536-12H, Plan A, Design #1 VO		ONICN 190703H, VERDAD PR Wk, Actual S/LB Surveys VO		HSR QJLP#20T #3-25, Mountain Petroleum P&A Wk, No Surveys VO