

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 CHIVE & SHALLOT PAD

CHIVE 2536-16H

Plan A

Design #1

Anticollision Summary Report

19 May, 2023

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well CHIVE 2536-16H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 5031.00usft (RIG)
Reference Site:	1N-64W-19 CHIVE & SHALLOT PAD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CHIVE 2536-16H	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	5/15/2023			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	2,070.00	Design #1 (Plan A)	ISCWSA MWD	Fixed:v2:standard declination	
2,070.00	17,915.96	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-19 CHIVE & SHALLOT PAD						
CHIVE 2536-10H - Plan A - Design #1	200.00	200.00	95.99	88.43	12.683	CC, ES
CHIVE 2536-10H - Plan A - Design #1	2,000.00	1,914.69	235.92	212.26	9.974	SF
CHIVE 2536-11H - Plan A - Design #1	200.00	200.00	79.99	72.43	10.569	CC, ES
CHIVE 2536-11H - Plan A - Design #1	2,000.00	1,929.28	206.74	182.73	8.613	SF
CHIVE 2536-12H - Plan A - Design #1	207.95	207.95	63.99	56.42	8.449	CC, ES
CHIVE 2536-12H - Plan A - Design #1	2,000.00	1,944.31	174.82	150.43	7.169	SF
CHIVE 2536-13H - Plan A - Design #1	203.52	203.52	47.99	40.42	6.339	CC, ES
CHIVE 2536-13H - Plan A - Design #1	2,000.00	1,958.78	140.87	116.18	5.706	SF
CHIVE 2536-14H - Plan A - Design #1	208.34	208.34	31.99	24.42	4.224	CC
CHIVE 2536-14H - Plan A - Design #1	300.00	299.80	32.05	24.40	4.188	ES
CHIVE 2536-14H - Plan A - Design #1	17,916.60	18,489.94	1,233.21	677.79	2.220	SF
CHIVE 2536-15H - Plan A - Design #1	216.60	216.60	16.00	8.42	2.111	CC
CHIVE 2536-15H - Plan A - Design #1	300.00	299.80	16.00	8.35	2.090	ES
CHIVE 2536-15H - Plan A - Design #1	16,300.00	16,565.62	517.03	36.55	1.076	Level 2, SF
CHIVE 2536-17H - Plan A - Design #1	320.50	320.50	16.00	8.32	2.084	CC, ES
CHIVE 2536-17H - Plan A - Design #1	17,916.60	17,685.56	616.62	61.44	1.111	Level 2, SF
SHALLOT 1930-18H - Plan A - Design #1	320.50	320.50	32.00	24.32	4.168	CC, ES, SF
SHALLOT 1930-19H - Plan A - Design #1	320.50	320.50	48.00	40.32	6.252	CC, ES, SF
SHALLOT 1930-20H - Plan A - Design #1	320.50	320.50	64.00	56.32	8.336	CC, ES, SF
SHALLOT 1930-21H - Plan A - Design #1	320.50	320.50	80.00	72.33	10.419	CC, ES, SF
SHALLOT 1930-22H - Plan A - Design #1	300.00	300.00	96.00	88.35	12.541	CC, ES
SHALLOT 1930-22H - Plan A - Design #1	320.50	320.08	96.05	88.37	12.510	SF
SHALLOT 1930-23H - Plan A - Design #1	203.39	203.39	112.01	104.43	14.794	CC, ES
SHALLOT 1930-23H - Plan A - Design #1	320.50	319.02	112.33	104.65	14.633	SF
SHALLOT 1930-24H - Plan A - Design #1	200.00	200.00	128.01	120.44	16.913	CC, ES
SHALLOT 1930-24H - Plan A - Design #1	300.00	296.99	128.95	121.30	16.853	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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Reference Site:	1N-64W-19 CHIVE & SHALLOT PAD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CHIVE 2536-16H	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

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	214.06	215.07	199.45	191.87	26.342	CC, ES
ONION 1907-01H - VERDAD PR Well - Actual SLB Surv	800.00	791.26	228.82	219.88	25.596	SF
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	200.76			
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	400.00	397.71	203.74	195.99	26.280	SF
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	145.14	146.15	202.71	195.17	26.895	CC, ES
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	400.00	399.22	204.15	196.40	26.339	SF
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	205.97			
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	400.00	399.28	208.38	200.63	26.907	SF
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	210.37			
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	500.00	500.24	216.59	208.70	27.458	SF
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	215.88			
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	400.00	399.50	218.66	210.92	28.242	SF
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	222.39			
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	400.00	397.85	224.07	216.33	28.946	SF
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	229.85			
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	300.00	294.18	231.14	223.52	30.319	SF
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	238.12			
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	186.79	187.79	238.14	230.58	31.522	ES
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	320.50	317.00	239.24	231.58	31.240	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						Out of range
SAFI 1224-06H - Verdad PR Well - Actual SLB Surveys						Out of range
SAFI 1224-08H - Verdad PR Well - Actual SLB Surveys						Out of range
SAFI 1224-10H - Verdad PR Well - Actual SLB Surveys						Out of range
SAFI 1224-12H - Verdad PR Well - Actual SLB Surveys	7,587.55	18,108.00	523.85	356.18	3.124	CC
SAFI 1224-12H - Verdad PR Well - Actual SLB Surveys	7,650.00	18,108.00	529.77	354.72	3.026	ES
SAFI 1224-12H - Verdad PR Well - Actual SLB Surveys	7,700.00	18,108.00	542.78	363.34	3.025	SF
SAFI 1224-14H - Verdad PR Well - Actual SLB Surveys	7,345.28	18,176.00	1,030.66	746.25	3.624	CC
SAFI 1224-14H - Verdad PR Well - Actual SLB Surveys	7,400.00	18,176.00	1,032.55	742.51	3.560	ES
SAFI 1224-14H - Verdad PR Well - Actual SLB Surveys	7,500.00	18,176.00	1,045.60	747.96	3.513	SF
1N-65W-24 Offsets						
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	7,791.75	6,917.90	746.91	661.59	8.754	CC
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	7,850.00	6,917.23	750.40	660.90	8.384	ES
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	8,000.00	6,901.03	789.83	691.69	8.048	SF
1N-65W-25 Offsets						
HSR OLIPHANT #3-25 - Mountain Petroleum P&A Well -						Out of range
HSR-AMEN #11-25 - KMG P&A Well - No Surveys						Out of range
HSR-HAFFNER #2-25 - HSR P&A Well - No Surveys	8,305.73	6,959.00	563.79	256.40	1.834	CC
HSR-HAFFNER #2-25 - HSR P&A Well - No Surveys	8,400.00	6,959.00	571.62	253.63	1.798	ES, SF
1N-65W-36 Offsets						
ACCO TERRA STATE #18-36 - Kerr McGee PR Well - N						Out of range
ACCO-TERRA-STATE ET AL #41 - Kerr McGee PR Well	14,205.48	6,963.00	352.58	-87.54	0.801	Level 1, CC, ES, SF
RUEBEL ET AL #36-1 - KPK PR Well - No Surveys	17,300.00	6,958.00	151.92	-352.10	0.301	Level 1, ES, SF
RUEBEL ET AL #36-1 - KPK PR Well - No Surveys	17,300.83	6,958.00	151.92	-351.73	0.302	Level 1, CC
STATE #36-2 - KPK P&A Well - No Surveys						Out of range

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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 Depths are relative to RKB = 20' @ 5031.00usft (RIG)

Offset Depths are relative to Offset Datum

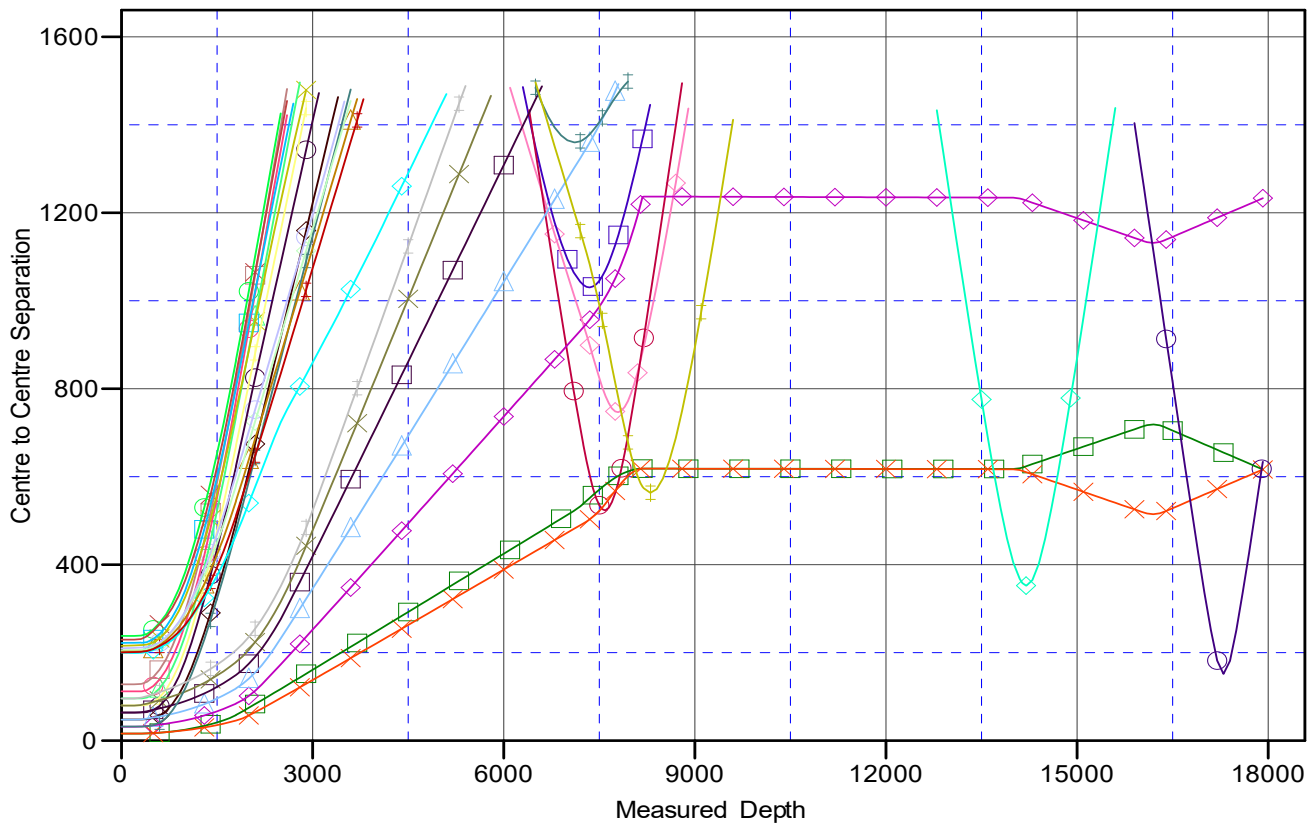
Central Meridian is -105.500000

Coordinates are relative to: CHIVE 2536-16H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Ladder Plot



LEGEND

Meel/01N-64W-24-2N, Verdad SI Well, Actual Ensign Surveys V0	SHALLOT 1930-24H, Plan A, Design #1 V0	ONION 190703H, VERDAD PR Well, Actual SLB Surveys V0
SAFI 1224-14H, Verdad PR Well, Actual SLB Surveys V0	CHIVE 2536-15H, Plan A, Design #1 V0	ONION 190705H, VERDAD PR Well, Actual SLB Surveys V0
SHALLOT 1930-21H, Plan A, Design #1 V0	CHIVE 2536-11H, Plan A, Design #1 V0	ONION 190701H, VERDAD PR Well, Actual SLB Surveys V0
CHIVE 2536-17H, Plan A, Design #1 V0	SHALLOT 1930-22H, Plan A, Design #1 V0	ONION 190702H, VERDAD PR Well, Actual SLB Surveys V0
SHALLOT 1930-23H, Plan A, Design #1 V0	CHIVE 2536-13H, Plan A, Design #1 V0	ONION 190706H, VERDAD PR Well, Actual SLB Surveys V0
SHALLOT 1930-20H, Plan A, Design #1 V0	SHALLOT 1930-18H, Plan A, Design #1 V0	ONION 190707H, VERDAD PR Well, Actual SLB Surveys V0
CHIVE 2536-14H, Plan A, Design #1 V0	CHIVE 2536-10H, Plan A, Design #1 V0	RUEBEL ET AL #36-1, KPPK PR Well, No Surveys V0
SHALLOT 1930-19H, Plan A, Design #1 V0	ONION 190709H, VERDAD PR Well, Actual SLB Surveys V0	ACCO-TERRA-STATE ET AL #41, Kerr McGee PR Well, No Surveys V0
CHIVE 2536-12H, Plan A, Design #1 V0	ONION 190704H, VERDAD PR Well, Actual SLB Surveys V0	HSR-HAFNER #2-25, HSR P&A Well, No Surveys V0
	ONION 190708H, VERDAD PR Well, Actual SLB Surveys V0	

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Offset Depths are relative to Offset Datum

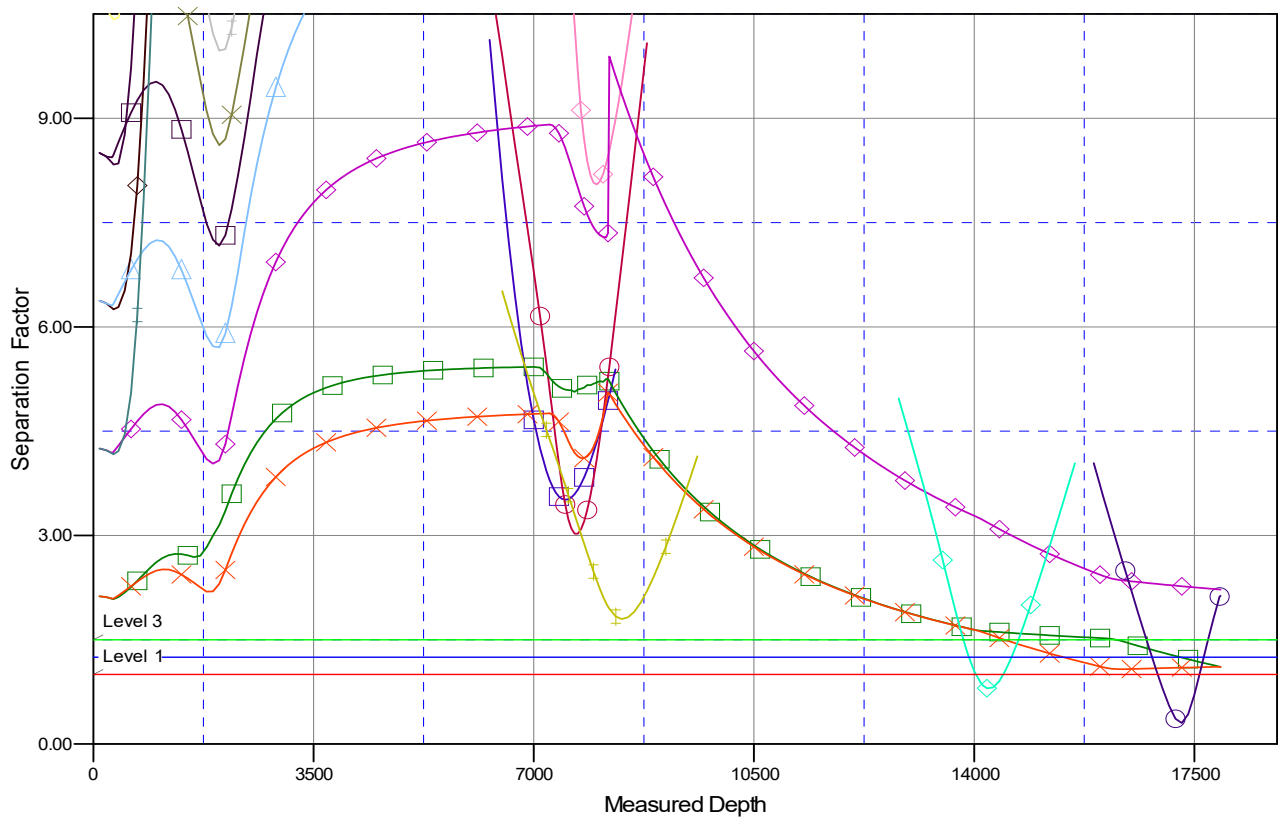
Central Meridian is -105.500000

Coordinates are relative to: CHIVE 2536-16H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Separation Factor Plot



LEGEND

<ul style="list-style-type: none"> Meeh01N-64W-24-2N, Verdad SI Well, Actual Ensign Surveys V0 SAFI 1224-14H, Verdad PR Well, Actual SLB Surveys V0 SAFI 1224-12H, Verdad PR Well, Actual SLB Surveys V0 SHALLOT 1930-21H, Plan A, Design #1 V0 CHIVE 2536-17H, Plan A, Design #1 V0 SHALLOT 1930-23H, Plan A, Design #1 V0 SHALLOT 1930-20H, Plan A, Design #1 V0 CHIVE 2536-14H, Plan A, Design #1 V0 SHALLOT 1930-19H, Plan A, Design #1 V0 CHIVE 2536-12H, Plan A, Design #1 V0 	<ul style="list-style-type: none"> SHALLOT 1930-24H, Plan A, Design #1 V0 CHIVE 2536-15H, Plan A, Design #1 V0 CHIVE 2536-11H, Plan A, Design #1 V0 SHALLOT 1930-22H, Plan A, Design #1 V0 CHIVE 2536-13H, Plan A, Design #1 V0 SHALLOT 1930-18H, Plan A, Design #1 V0 CHIVE 2536-10H, Plan A, Design #1 V0 ONION 190709H, VERDAD PR Well, Actual SLB Surveys V0 ONION 190704H, VERDAD PR Well, Actual SLB Surveys V0 ONION 190708H, VERDAD PR Well, Actual SLB Surveys V0 	<ul style="list-style-type: none"> ONION 190703H, VERDAD PR Well, Actual SLB Surveys V0 ONION 190705H, VERDAD PR Well, Actual SLB Surveys V0 ONION 190701H, VERDAD PR Well, Actual SLB Surveys V0 ONION 190702H, VERDAD PR Well, Actual SLB Surveys V0 ONION 190706H, VERDAD PR Well, Actual SLB Surveys V0 ONION 190707H, VERDAD PR Well, Actual SLB Surveys V0 RUEBEL ETAL #36-1, KPK PR Well, No Surveys V0 ACCO-TERRA-STATE ET AL #41, Kerr McGee PR Well No Surveys V0 HSR-HAFNER #2-25, HSR P&A Well, No Surveys V0
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