

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 CHIVE & SHALLOT PAD

CHIVE 2536-11H

Plan A

Design #1

Anticollision Summary Report

19 May, 2023

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well CHIVE 2536-11H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 5031.00usft
Reference Site:	1N-64W-19 CHIVE & SHALLOT PAD	MD Reference:	RKB = 20' @ 5031.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CHIVE 2536-11H	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	19,645.51	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	16.00	8.43	2.114	CC
CHIVE 2536-10H - Plan A - Design #1	2,700.00	2,681.27	40.74	0.50	1.013	Level 2, ES, SF
CHIVE 2536-12H - Plan A - Design #1	219.60	219.60	16.00	8.42	2.110	CC
CHIVE 2536-12H - Plan A - Design #1	2,500.00	2,516.50	41.85	6.77	1.193	Level 2, ES
CHIVE 2536-12H - Plan A - Design #1	19,645.50	19,228.09	616.60	61.76	1.111	Level 2, SF
CHIVE 2536-13H - Plan A - Design #1	219.60	219.60	32.00	24.42	4.221	CC, ES
CHIVE 2536-13H - Plan A - Design #1	19,645.50	18,847.19	1,233.20	678.34	2.223	SF
CHIVE 2536-14H - Plan A - Design #1	219.60	219.60	48.00	40.42	6.331	CC, ES
CHIVE 2536-14H - Plan A - Design #1	2,200.00	2,236.27	122.07	93.01	4.200	SF
CHIVE 2536-15H - Plan A - Design #1	219.60	219.60	63.99	56.41	8.440	CC, ES
CHIVE 2536-15H - Plan A - Design #1	2,000.00	2,039.57	155.49	129.88	6.072	SF
CHIVE 2536-16H - Plan A - Design #1	219.60	219.60	79.99	72.41	10.550	CC, ES
CHIVE 2536-16H - Plan A - Design #1	2,000.00	2,035.99	216.08	190.76	8.533	SF
CHIVE 2536-17H - Plan A - Design #1	219.60	219.60	95.99	88.41	12.661	CC, ES
CHIVE 2536-17H - Plan A - Design #1	1,900.00	1,927.02	268.19	245.56	11.851	SF
SHALLOT 1930-18H - Plan A - Design #1	219.60	219.60	112.00	104.41	14.771	CC, ES, SF
SHALLOT 1930-19H - Plan A - Design #1	219.60	219.60	128.00	120.41	16.881	CC, ES
SHALLOT 1930-19H - Plan A - Design #1	300.00	299.99	129.08	121.42	16.867	SF
SHALLOT 1930-20H - Plan A - Design #1	219.60	219.60	144.00	136.42	18.992	CC, ES
SHALLOT 1930-20H - Plan A - Design #1	300.00	299.99	145.08	137.42	18.958	SF
SHALLOT 1930-21H - Plan A - Design #1	219.60	219.60	160.00	152.42	21.102	CC, ES
SHALLOT 1930-21H - Plan A - Design #1	300.00	299.99	161.08	153.43	21.049	SF
SHALLOT 1930-22H - Plan A - Design #1	219.60	219.60	176.00	168.42	23.213	CC, ES
SHALLOT 1930-22H - Plan A - Design #1	300.00	299.99	177.08	169.43	23.140	SF
SHALLOT 1930-23H - Plan A - Design #1	219.60	219.60	192.00	184.42	25.323	CC, ES
SHALLOT 1930-23H - Plan A - Design #1	300.00	298.54	193.19	185.53	25.248	SF
SHALLOT 1930-24H - Plan A - Design #1	203.23	203.23	208.00	200.43	27.474	CC
SHALLOT 1930-24H - Plan A - Design #1	219.60	219.50	208.00	200.42	27.433	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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Site Error:	0.00 usft	North Reference:	True
Reference Well:	CHIVE 2536-11H	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	284.93	289.02	214.77	207.14	28.157	CC, ES
ONION 1907-01H - VERDAD PR Well - Actual SLB Surv	1,300.00	1,292.82	315.54	302.70	24.568	SF
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	222.41			
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	400.00	399.87	227.48	219.73	29.342	SF
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	229.87			
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	300.00	300.26	231.34	223.70	30.298	SF
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	238.13			
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	300.00	299.72	239.95	232.32	31.449	SF
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	247.17			
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	300.00	300.32	248.93	241.30	32.622	SF
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	256.91			
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	300.00	299.60	259.31	251.68	33.987	SF
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	267.24			
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	300.00	301.72	268.34	260.71	35.168	SF
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	190.42	191.42	278.13	270.57	36.831	CC
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	200.00	200.83	278.13	270.57	36.810	ES
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	219.60	219.76	278.16	270.60	36.763	SF
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	188.29	189.30	289.42	281.86	38.305	CC, ES
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	300.00	295.62	291.39	283.75	38.166	SF
1N-65W-12 SAFI 1224 PAD						
SAFI 1224-02H - Verdad PR Well - Actual SLB Surveys	9,490.41	18,366.00	851.20	468.22	2.223	CC
SAFI 1224-02H - Verdad PR Well - Actual SLB Surveys	9,500.00	18,366.00	851.31	467.68	2.219	ES
SAFI 1224-02H - Verdad PR Well - Actual SLB Surveys	9,550.00	18,366.00	855.57	469.39	2.215	SF
SAFI 1224-04H - Verdad PR Well - Actual SLB Surveys	9,310.69	18,174.00	466.66	265.72	2.322	CC
SAFI 1224-04H - Verdad PR Well - Actual SLB Surveys	9,350.00	18,174.00	469.17	265.60	2.305	ES, SF
SAFI 1224-06H - Verdad PR Well - Actual SLB Surveys	8,822.24	18,015.00	783.88	539.18	3.203	CC
SAFI 1224-06H - Verdad PR Well - Actual SLB Surveys	8,950.00	18,015.00	794.24	527.02	2.972	ES
SAFI 1224-06H - Verdad PR Well - Actual SLB Surveys	9,050.00	18,015.00	817.45	537.65	2.922	SF
SAFI 1224-08H - Verdad PR Well - Actual SLB Surveys	8,342.90	17,961.00	1,332.68	1,078.91	5.252	CC
SAFI 1224-08H - Verdad PR Well - Actual SLB Surveys	8,500.00	17,961.00	1,341.91	1,069.77	4.931	ES
SAFI 1224-08H - Verdad PR Well - Actual SLB Surveys	8,800.00	17,961.00	1,408.89	1,110.58	4.723	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	6,451.72	4,921.34	751.37	632.50	6.321	CC
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	6,500.00	4,951.82	752.28	632.28	6.269	ES
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	6,600.00	5,020.88	759.68	638.07	6.247	SF
1N-65W-25 Offsets						
HSR OLIPHANT #3-25 - Mountain Petroleum P&A Well -	10,100.00	6,957.00	1,372.12	1,014.10	3.833	SF
HSR OLIPHANT #3-25 - Mountain Petroleum P&A Well -	10,400.00	6,957.00	1,315.34	980.83	3.932	ES
HSR OLIPHANT #3-25 - Mountain Petroleum P&A Well -	10,504.34	6,957.00	1,311.19	985.54	4.026	CC
HSR-AMEN #11-25 - KMG P&A Well - No Surveys	12,000.00	6,959.00	781.69	401.11	2.054	SF
HSR-AMEN #11-25 - KMG P&A Well - No Surveys	12,100.00	6,959.00	767.14	400.45	2.092	ES
HSR-AMEN #11-25 - KMG P&A Well - No Surveys	12,162.64	6,959.00	764.58	407.30	2.140	CC
HSR-HAFFNER #2-25 - HSR P&A Well - No Surveys	6,535.95	4,971.50	1,397.06	1,116.55	4.980	CC
HSR-HAFFNER #2-25 - HSR P&A Well - No Surveys	6,600.00	5,014.25	1,397.88	1,114.49	4.933	ES
HSR-HAFFNER #2-25 - HSR P&A Well - No Surveys	7,000.00	5,281.22	1,439.16	1,140.60	4.820	SF

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Reference Site:	1N-64W-19 CHIVE & SHALLOT PAD	MD Reference:	RKB = 20' @ 5031.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CHIVE 2536-11H	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-65W-36 Offsets						
ACCO TERRA STATE #18-36 - Kerr McGee PR Well - N	16,447.37	6,989.00	151.55	-299.19	0.336	Level 1, CC
ACCO TERRA STATE #18-36 - Kerr McGee PR Well - N	16,500.00	6,989.00	159.97	-321.98	0.332	Level 1, ES, SF
ACCO-TERRA-STATE ET AL #41 - Kerr McGee PR Well						Out of range
RUEBEL ET AL #36-1 - KPK PR Well - No Surveys						Out of range
STATE #36-2 - KPK P&A Well - No Surveys	18,352.60	7,007.00	197.76	-301.54	0.396	Level 1, CC
STATE #36-2 - KPK P&A Well - No Surveys	18,400.00	7,007.00	203.37	-316.78	0.391	Level 1, ES, SF

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well CHIVE 2536-11H
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Reference Site:	1N-64W-19 CHIVE & SHALLOT PAD	MD Reference:	RKB = 20' @ 5031.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CHIVE 2536-11H	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 Depths are relative to RKB = 20' @ 5031.00usft

Offset Depths are relative to Offset Datum

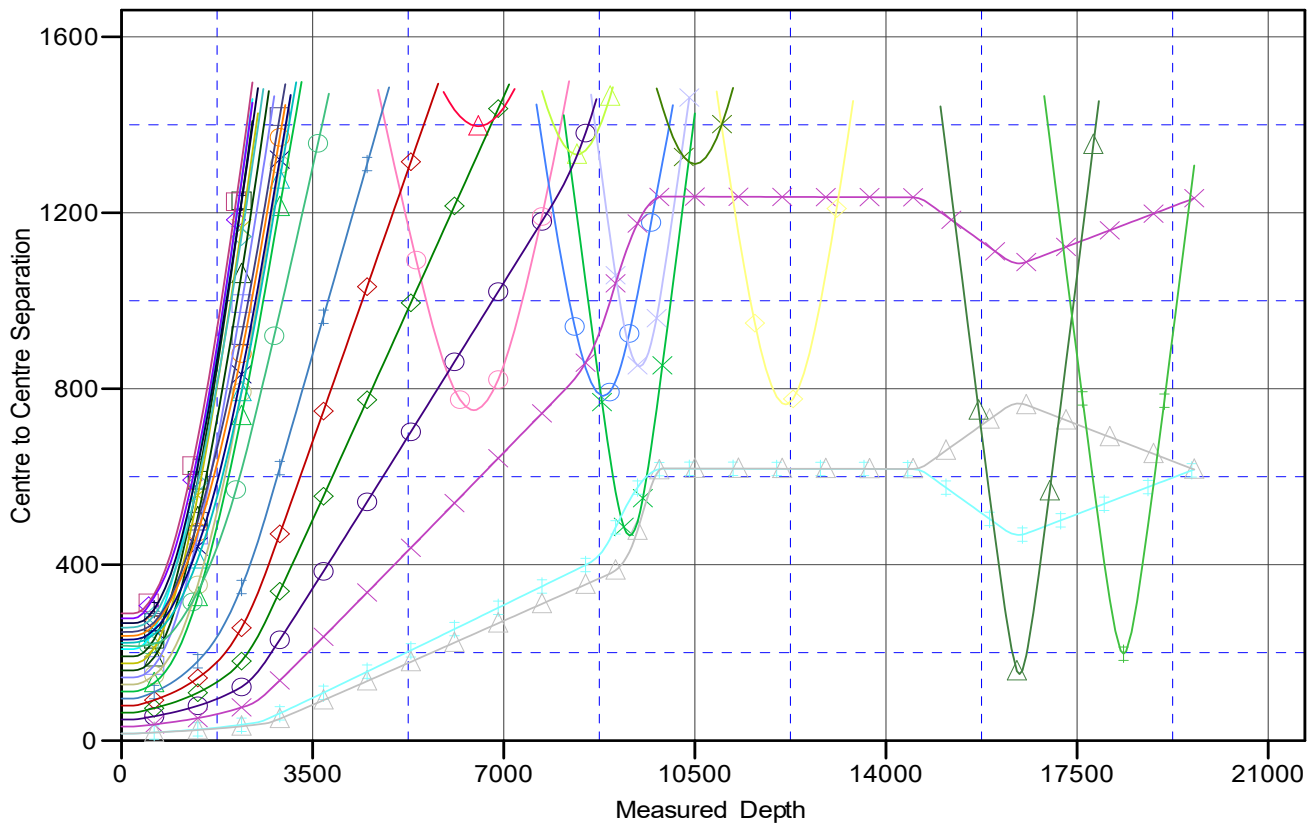
Central Meridian is -105.500000

Coordinates are relative to: CHIVE 2536-11H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Ladder Plot



LEGEND

<ul style="list-style-type: none"> MeeH 01N-64W-24-2N, Verdad SI Well, Actual Ensign Surveys V0 SAFI 122404H, Verdad PR Well, Actual SLB Surveys V0 SAFI 122408H, Verdad PR Well, Actual SLB Surveys V0 SAFI 122408H, Verdad PR Well, Actual SLB Surveys V0 SAFI 122402H, Verdad PR Well, Actual SLB Surveys V0 SHALLOT 1300-21H, Plan A, Design #1 V0 CHIVE 2536-11H, Plan A, Design #1 V0 SHALLOT 1300-21H, Plan A, Design #1 V0 SHALLOT 1300-20H, Plan A, Design #1 V0 CHIVE 2536-14H, Plan A, Design #1 V0 CHIVE 2536-16H, Plan A, Design #1 V0 	<ul style="list-style-type: none"> CHIVE 2536-12H, Plan A, Design #1 V0 SHALLOT 1300-24H, Plan A, Design #1 V0 SHALLOT 1300-19H, Plan A, Design #1 V0 CHIVE 2536-15H, Plan A, Design #1 V0 SHALLOT 1300-22H, Plan A, Design #1 V0 CHIVE 2536-13H, Plan A, Design #1 V0 SHALLOT 1300-19H, Plan A, Design #1 V0 CHIVE 2536-10H, Plan A, Design #1 V0 ONION 190702H, 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 ACCO TERRA STATE #18-35, Kar McGee PR Well, No Surveys V0 STATE #62, KPR P&A Well, No Surveys V0 HSR-AMENH11-25, KMG P&A Well, No Surveys V0 HSR-HAFFNER #2-25, HSR P&A Well, No Surveys V0 HSR OLIPHANT #3-25, Mountain Petroleum P&A Well, No Surveys V0
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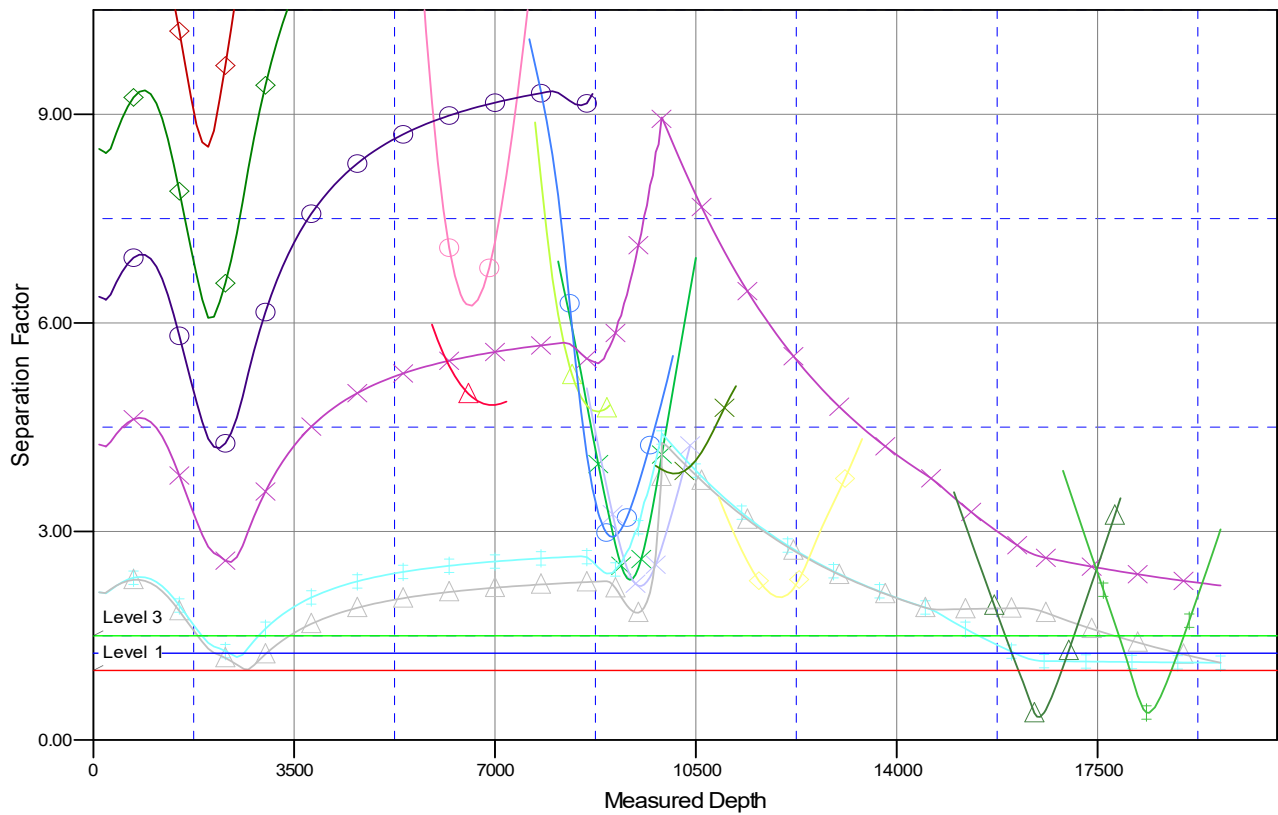
Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well CHIVE 2536-11H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 5031.00usft
Reference Site:	1N-64W-19 CHIVE & SHALLOT PAD	MD Reference:	RKB = 20' @ 5031.00usft
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Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 5031.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: CHIVE 2536-11H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.58°

Separation Factor Plot



LEGEND

MeelH 01N-64W-24-2N, Verdad SI Well, Actual Ensign Surveys V0	CHIVE 2536-12H, Plan A, Design #1 V0	ONION 190703H, VERDAD PR Well, Actual SLB Surveys V0
SAFI 122404H, Verdad PR Well, Actual SLB Surveys V0	SHALLOT 1300-24H, Plan A, Design #1 V0	ONION 190706H, VERDAD PR Well, Actual SLB Surveys V0
SAFI 122408H, Verdad PR Well, Actual SLB Surveys V0	SHALLOT 1300-19H, Plan A, Design #1 V0	ONION 190701H, VERDAD PR Well, Actual SLB Surveys V0
SAFI 122409H, Verdad PR Well, Actual SLB Surveys V0	CHIVE 2536-15H, Plan A, Design #1 V0	ONION 190702H, VERDAD PR Well, Actual SLB Surveys V0
SAFI 122402H, Verdad PR Well, Actual SLB Surveys V0	SHALLOT 1300-22H, Plan A, Design #1 V0	ONION 190706H, VERDAD PR Well, Actual SLB Surveys V0
SHALLOT 1300-21H, Plan A, Design #1 V0	CHIVE 2536-13H, Plan A, Design #1 V0	ONION 190707H, VERDAD PR Well, Actual SLB Surveys V0
CHIVE 2536-17H, Plan A, Design #1 V0	SHALLOT 1300-19H, Plan A, Design #1 V0	ACCO TERRA STATE #18-35, Kar McGee PR Well, No Surveys V0
SHALLOT 1300-23H, Plan A, Design #1 V0	CHIVE 2536-10H, Plan A, Design #1 V0	STATE #852, KPK P&A Well, No Surveys V0
SHALLOT 1300-20H, Plan A, Design #1 V0	ONION 190709H, VERDAD PR Well, Actual SLB Surveys V0	HSR-AMENH11-25, KMG P&A Well, No Surveys V0
CHIVE 2536-14H, Plan A, Design #1 V0	ONION 190704H, VERDAD PR Well, Actual SLB Surveys V0	HSR-HAFFNER #2-25, HSR P&A Well, No Surveys V0
CHIVE 2536-16H, Plan A, Design #1 V0	ONION 190708H, VERDAD PR Well, Actual SLB Surveys V0	HSR OLIPHANT #3-25, Mountain Petroleum P&A Well, No Surveys V0