

VERDAD RESOURCES

**WATTENBERG FIELD
2N-64W-32 KIWI 2920 PAD
KIWI 2920-01H**

**Wellbore #1
Design #2**

Anticollision Summary Report

15 December, 2022

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well KIWI 2920-01H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Reference Site:	2N-64W-32 KIWI 2920 PAD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	KIWI 2920-01H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Reference	Design #2		
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	12/15/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	2,486.00	Design #2 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination
2,486.00	17,622.75	Design #2 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination

Summary						
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
2N-64W-19 Offsets Incomplete						
ROBERTSON 16C-19HZ - NOBLE PR Well - Actual BKR	13,169.41	11,503.00	942.63	644.52	3.162	CC, ES, SF
ROBERTSON 16N-19HZ - NOBLE PR Well - Actual BKR	13,180.10	11,484.00	911.20	607.12	2.997	CC
ROBERTSON 16N-19HZ - NOBLE PR Well - Actual BKR	13,200.00	11,484.00	911.42	605.48	2.979	ES, SF
2N-64W-20 Offsets						
DALE 1 - Noble SI Well - Actual VES Surveys	13,600.00	6,979.63	515.79	313.31	2.547	ES, SF
DALE 1 - Noble SI Well - Actual VES Surveys	13,633.51	6,979.21	514.70	314.13	2.566	CC
Dale 4A-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4B-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4C-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4D-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4E-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4F-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4G-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4H-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4I-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4J-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
Dale 4K-20H-O264 - CPR PR Well - Actual SDI Surveys						Out of range
DALE 'E' UNIT #1 - CPR P&A Well - No Surveys						Out of range
FOY #1 - Noble SI Well - Actual VES Surveys	17,000.00	6,913.37	510.62	229.55	1.817	ES, SF
FOY #1 - Noble SI Well - Actual VES Surveys	17,036.44	6,913.68	509.32	230.11	1.824	CC
FOY Y #20-6 - Noble SI Well - Actual VES Surveys						Out of range
KELLER #20-2 - Noble T/A Well - No Surveys						Out of range
RUHL 1 - Nebraska Drillers DA Well - No Surveys						Out of range
STARKE Y #20-03 - Noble P&A Well - Actual VES Surveys						Out of range

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well KIWI 2920-01H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Reference Site:	2N-64W-32 KIWI 2920 PAD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	KIWI 2920-01H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)		Separation Factor	Warning
Offset Well - Wellbore - Design						
2N-64W-29 Offsets						
BAUMGARTNER 14-29 - Noble P&A Well - Actual VES S	8,072.28	6,954.87	258.71	168.86	2.879	CC, ES, SF
BELL #41-29 - Noble T/A Well - No Surveys						Out of range
Bell USX #Y29-03 - Noble T/A Well - No Surveys						Out of range
JIM CREEK #1-29 - Noble P&A Well - No Surveys	8,600.00	6,967.00	1,014.06	687.35	3.104	SF
JIM CREEK #1-29 - Noble P&A Well - No Surveys	8,651.05	6,967.00	1,013.23	687.28	3.109	CC, ES
KAMINSKY #1-29 - Noble P&A Well - Actual VES Survey	11,200.00	6,987.31	698.09	549.47	4.697	SF
KAMINSKY #1-29 - Noble P&A Well - Actual VES Survey	11,259.07	6,987.19	695.59	549.16	4.751	CC, ES
NGL C5 - NGL T/A IJ Well - No Surveys	7,724.11	6,920.85	152.28	-159.18	0.489	Level 1, CC, SF
NGL C5 - NGL T/A IJ Well - No Surveys	7,750.00	6,927.50	154.42	-160.27	0.491	Level 1, ES
NGL C5A - NGL IJ Well - Actual Ensign Surveys						Out of range
NGL C5B - NGL IJ Well - Actual Total Surveys	11,500.00	7,462.35	1,255.64	1,060.47	6.434	SF
NGL C5B - NGL IJ Well - Actual Total Surveys	11,600.00	7,475.00	1,251.42	1,058.26	6.478	ES
NGL C5B - NGL IJ Well - Actual Total Surveys	11,603.66	7,475.00	1,251.42	1,058.35	6.482	CC
PARKER #29-34 - Noble SI Well - Actual Coretech Surve						Out of range
2N-64W-30 Offsets Incomplete						
GRATTAN 4A-30H - CPR PR Well - Actual Cathedral Su	8,860.16	7,460.25	811.04	704.21	7.592	CC
GRATTAN 4A-30H - CPR PR Well - Actual Cathedral Su	8,900.00	7,490.98	811.54	702.91	7.471	ES
GRATTAN 4A-30H - CPR PR Well - Actual Cathedral Su	12,500.00	10,980.00	1,203.33	928.71	4.382	SF
2N-64W-31 Offsets Incomplete						
Land JG 31-34D - GWOG Planned Well - Planned Ensig						Out of range
Land USX #Y31-01 - Noble SI Well - No Surveys						Out of range
2N-64W-32 KIWI 2920 PAD						
KIWI 2920-02H - Wellbore #1 - Design #2	201.50	201.50	16.00	8.43	2.114	CC
KIWI 2920-02H - Wellbore #1 - Design #2	17,600.00	17,509.88	544.13	-11.44	0.979	Level 1, ES, SF
KIWI 2920-03H - Wellbore #1 - Design #2	201.50	201.50	32.00	24.43	4.227	CC, ES
KIWI 2920-03H - Wellbore #1 - Design #2	17,623.36	17,400.13	1,087.08	530.04	1.952	SF
KIWI 2920-04H - Wellbore #1 - Design #2	201.50	201.50	48.00	40.43	6.341	CC, ES, SF
KIWI 2920-05H - Wellbore #1 - Design #2	201.50	201.50	64.00	56.43	8.455	CC, ES, SF
KIWI 2920-06H - Wellbore #1 - Design #2	201.50	201.50	80.00	72.43	10.569	CC, ES, SF
KIWI 2920-07H - Wellbore #1 - Design #2	201.50	201.50	96.00	88.43	12.682	CC, ES, SF
KIWI 2920-08H - Wellbore #1 - Design #2	201.50	201.50	112.00	104.43	14.796	CC, ES, SF
KIWI 2929-09H - Wellbore #1 - Design #2	201.50	201.50	128.00	120.43	16.910	CC, ES, SF

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well KIWI 2920-01H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Reference Site:	2N-64W-32 KIWI 2920 PAD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	KIWI 2920-01H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #2	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						
2N-64W-32 Offsets						
NEWNAM 2-32 - CPR P&A Well - No Surveys	3,992.80	3,671.56	456.43	294.42	2.817	CC
NEWNAM 2-32 - CPR P&A Well - No Surveys	4,100.00	3,769.31	458.55	292.26	2.757	ES
NEWNAM 2-32 - CPR P&A Well - No Surveys	4,300.00	3,951.68	473.54	299.88	2.727	SF
Newnam 2A-32H-C264 - CPR PR Well - Actual SDI Surv	7,443.83	6,950.16	729.98	642.81	8.374	CC
Newnam 2A-32H-C264 - CPR PR Well - Actual SDI Surv	7,500.00	6,957.87	732.10	641.96	8.122	ES
Newnam 2A-32H-C264 - CPR PR Well - Actual SDI Surv	7,650.00	6,955.37	758.37	661.68	7.844	SF
Newnam 2B-32H-C264 - CPR PR Well - Actual SDI Surv	7,305.88	6,800.98	553.58	472.58	6.835	CC
Newnam 2B-32H-C264 - CPR PR Well - Actual SDI Surv	7,350.00	6,815.34	555.01	471.83	6.672	ES
Newnam 2B-32H-C264 - CPR PR Well - Actual SDI Surv	7,450.00	6,835.66	569.58	482.27	6.524	SF
Newnam 2C-32H-C264 - CPR PR Well - Actual SDI Surv	7,255.81	6,788.00	223.36	140.05	2.681	CC, ES
Newnam 2C-32H-C264 - CPR PR Well - Actual SDI Surv	7,300.00	6,805.21	227.04	140.96	2.638	SF
Newnam 2D-32H-C264 - CPR PR Well - Actual SDI Surv	7,137.76	6,642.06	105.69	26.81	1.340	Level 3, CC
Newnam 2D-32H-C264 - CPR PR Well - Actual SDI Surv	7,151.55	6,651.73	106.10	25.58	1.318	Level 3, ES, SF
Newnam 2E-32H-C264 - CPR PR Well - Actual SDI Surv	6,900.00	6,433.47	77.08	-1.86	0.976	Level 1, ES, SF
Newnam 2E-32H-C264 - CPR PR Well - Actual SDI Surv	6,922.57	6,452.83	76.03	-0.51	0.993	Level 1, CC
Newnam 2F-32H-C264 - CPR PR Well - Actual SDI Surv	6,591.33	6,124.94	257.68	182.44	3.425	CC
Newnam 2F-32H-C264 - CPR PR Well - Actual SDI Surv	6,600.00	6,132.71	257.71	182.42	3.423	ES, SF
Newnam 2G-32H-C264 - CPR PR Well - Actual SDI Surv	6,217.80	5,766.32	422.04	353.21	6.132	CC, ES
Newnam 2G-32H-C264 - CPR PR Well - Actual SDI Surv	6,300.00	5,841.88	423.34	353.74	6.082	SF
Newnam 2H-32H-C264 - CPR PR Well - Actual SDI Surv	5,780.54	5,348.51	583.16	520.78	9.349	CC
Newnam 2H-32H-C264 - CPR PR Well - Actual SDI Surv	5,800.00	5,364.84	583.23	520.60	9.312	ES
Newnam 2H-32H-C264 - CPR PR Well - Actual SDI Surv	6,100.00	5,650.95	598.72	533.11	9.126	SF
Newnam 2I-32H-C264 - CPR PR Well - Actual SDI Surv	5,449.21	5,051.26	769.66	712.00	13.348	CC
Newnam 2I-32H-C264 - CPR PR Well - Actual SDI Surv	5,500.00	5,099.61	769.89	711.58	13.205	ES
Newnam 2I-32H-C264 - CPR PR Well - Actual SDI Surv	6,000.00	5,572.54	793.41	730.27	12.566	SF
Newnam 2J-32H-C264 - CPR PR Well - Actual SDI Surv	5,167.47	4,829.99	893.01	833.75	15.069	CC
Newnam 2J-32H-C264 - CPR PR Well - Actual SDI Surv	5,200.00	4,859.33	893.11	833.53	14.988	ES
Newnam 2J-32H-C264 - CPR PR Well - Actual SDI Surv	5,600.00	5,192.57	914.35	851.29	14.499	SF
Newnam 2K-32H-C264 - CPR PR Well - Actual SDI Surv	4,220.66	3,869.92	1,060.45	1,015.41	23.545	CC
Newnam 2K-32H-C264 - CPR PR Well - Actual SDI Surv	4,400.00	4,058.47	1,061.63	1,014.43	22.493	ES
Newnam 2K-32H-C264 - CPR PR Well - Actual SDI Surv	5,700.00	5,321.40	1,153.50	1,094.60	19.584	SF
Newnam 2L-32H-C264 - SDI MWD Surveys - Actual SDI	3,864.53	3,495.80	1,024.60	983.74	25.077	CC
Newnam 2L-32H-C264 - SDI MWD Surveys - Actual SDI	3,900.00	3,527.78	1,024.73	983.42	24.810	ES
Newnam 2L-32H-C264 - SDI MWD Surveys - Actual SDI	4,800.00	4,322.92	1,116.81	1,066.02	21.987	SF
RUHL 1 - CPR P&A Well - No Surveys						Out of range
Ruhl 1A-32H-B264 - CPR PR Well - Actual SDI Surveys	3,930.41	3,676.51	1,448.67	1,406.47	34.328	CC
Ruhl 1A-32H-B264 - CPR PR Well - Actual SDI Surveys	4,000.00	3,733.47	1,449.11	1,406.20	33.770	ES
Ruhl 1A-32H-B264 - CPR PR Well - Actual SDI Surveys	4,700.00	4,355.51	1,490.61	1,440.84	29.948	SF
Ruhl 1B-32H-B264 - CPR PR Well - Actual SDI Surveys						Out of range
Ruhl 1C-32H-B264 - CPR PR Well - Actual SDI Surveys						Out of range
Ruhl 1D-32H-B264 - CPR PR Well - Actual SDI Surveys						Out of range
Ruhl 1E-32H-B264 - CPR PR Well - Actual SDI Surveys						Out of range
Ruhl 1F-32H-B264 - CPR PR Well - Actual SDI Surveys						Out of range
Ruhl 1G-32H-B264 - CPR SI Well - Actual Cathedral Sur						Out of range
Ruhl 1H-32H-B264 - CPR PR Well - Actual Cathedral Su						Out of range
Ruhl 1I-32H-B264 - CPR PR Well - Actual Cathedral Sur						Out of range
Ruhl 1J-32H-B264 - CPR PR Well - Actual Cathedral Su						Out of range
Ruhl 1K-32H-B264 - CPR PR Well - Actual Cathedral Su						Out of range
Ruhl 1L-32H-B264 - CPR PR Well - Actual Cathedral Su						Out of range

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well KIWI 2920-01H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Reference Site:	2N-64W-32 KIWI 2920 PAD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	KIWI 2920-01H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 4991.00usft (RIG)

Offset Depths are relative to Offset Datum

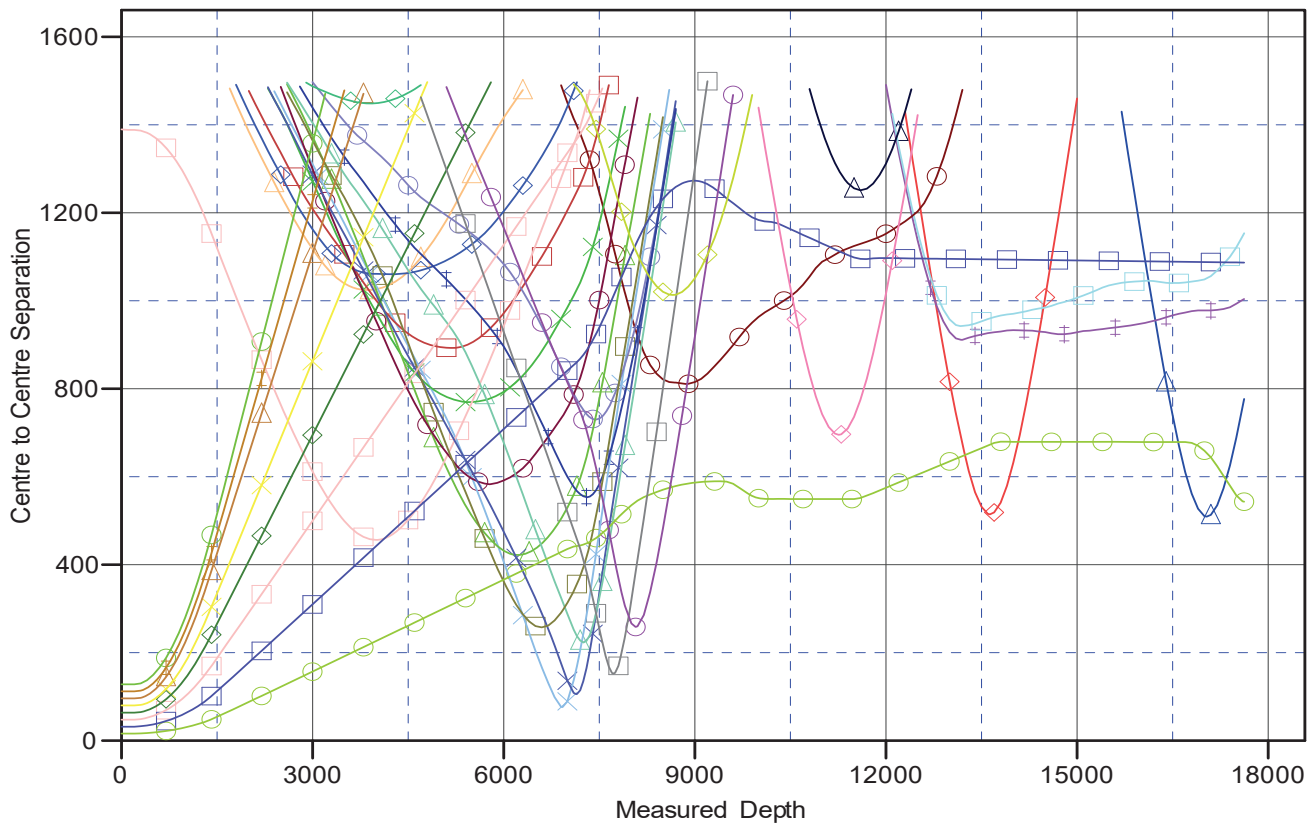
Central Meridian is -105.500000

Coordinates are relative to: KIWI 2920-01H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°

Ladder Plot



LEGEND

DALE 1, Noble SI Well, Actual VES Surveys V0	Newnam 20-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
FOY #1, Noble SI Well, Actual VES Surveys V0	NEWNAM 232, CPR P&A Well, No Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
ROBERTSON 16N-19H, NOBLE PR Well, Actual BKR Surveys V0	Newnam 24-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
ROBERTSON 16C-19H, NOBLE PR Well, Actual BKR Surveys V0	Ruhr 1A-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
GRATTAN 4A-30H, CPR PR Well, Actual Cathedral Surveys V0	Newnam 2D-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
Newnam 2L-32H-C264, SDI MWD Surveys, Actual SDI Surveys V0	Newnam 20-32H-C264, CPR PR Well, Actual SDI Surveys V0	NGL CS, NGL T/A LJ Well, No Surveys V0
Newnam 2E-32H-C264, CPR PR Well, Actual SDI Surveys V0	Newnam 2B-32H-C264, CPR PR Well, Actual SDI Surveys V0	BAUMGARTNER 14-2S, Noble P&A Well, Actual VES Surveys V0
Newnam 2J-32H-C264, CPR PR Well, Actual SDI Surveys V0	Newnam 2F-32H-C264, CPR PR Well, Actual SDI Surveys V0	KAMINSKY #1-2S, Noble P&A Well, Actual VES Surveys V0
Newnam 2A-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0	JIM CREEK #1-2S, Noble P&A Well, No Surveys V0
Newnam 2I-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0	NGL CSB, NGL LJ Well, Actual Total Surveys V0
Newnam 2K-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0	

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well KIWI 2920-01H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4991.00usft (RIG)
Reference Site:	2N-64W-32 KIWI 2920 PAD	MD Reference:	RKB = 20' @ 4991.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	KIWI 2920-01H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 4991.00usft (RIG)

Offset Depths are relative to Offset Datum

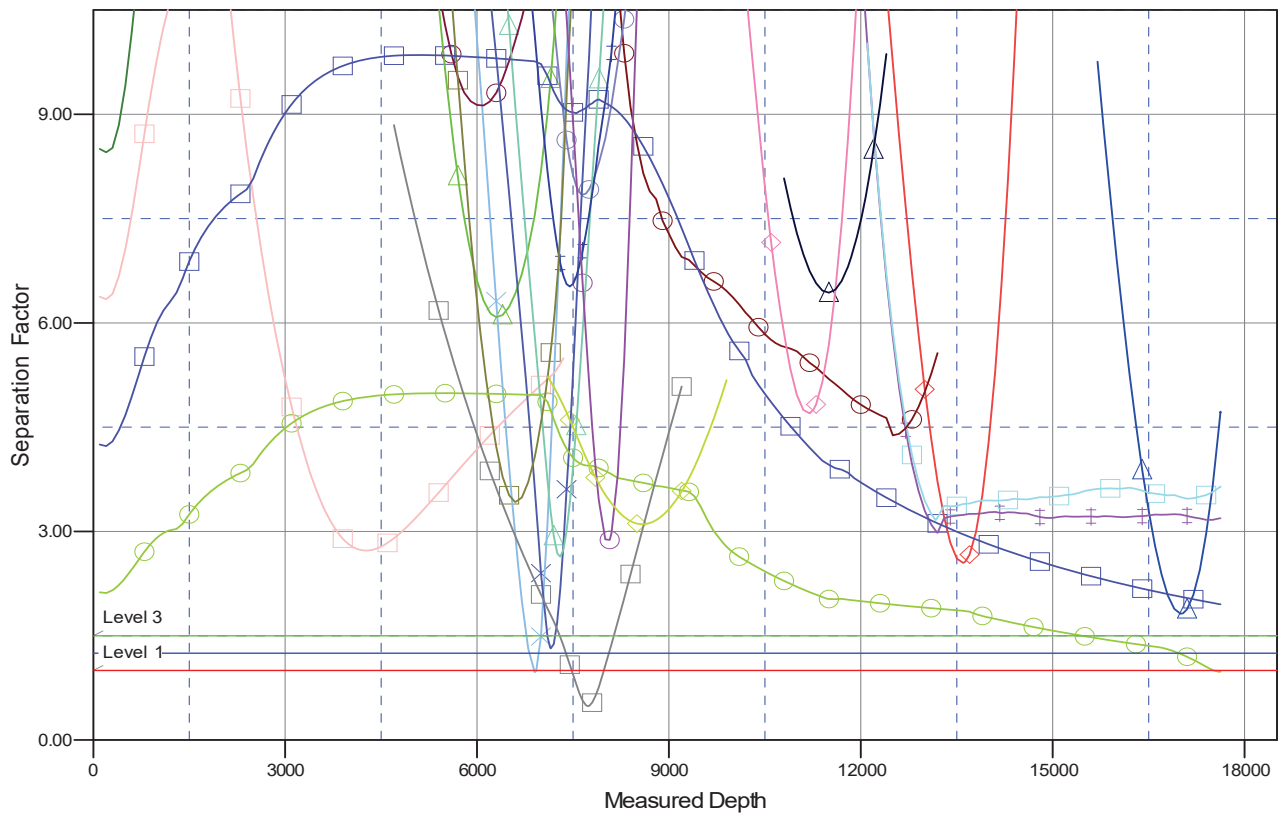
Central Meridian is -105.500000

Coordinates are relative to: KIWI 2920-01H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°

Separation Factor Plot



LEGEND

DALE 1, Noble SI Well, Actual VES Surveys V0	Newnam 20-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
FOY #1, Noble SI Well, Actual VES Surveys V0	NEWNAM 232, CPR P&A Well, No Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
ROBERTSON 16N-19H, NOBLE PR Well, Actual BKR Surveys V0	Newnam 24-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
ROBERTSON 16C-19H, NOBLE PR Well, Actual BKR Surveys V0	Ruhr 1A-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
GRATTAN-4A-30H, CPR PR Well, Actual Cathedral Surveys V0	Newnam 20-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0
Newnam 2L-32H-C264, SDI MWD Surveys, Actual SDI Surveys V0	Newnam 20-32H-C264, CPR PR Well, Actual SDI Surveys V0	NGL CS, NGL 1/A LJ Well, No Surveys V0
Newnam 25-32H-C264, CPR PR Well, Actual SDI Surveys V0	Newnam 25-32H-C264, CPR PR Well, Actual SDI Surveys V0	BALMIGARTNER 14-25, Noble P&A Well, Actual VES Surveys V0
Newnam 2J-32H-C264, CPR PR Well, Actual SDI Surveys V0	Newnam 25-32H-C264, CPR PR Well, Actual SDI Surveys V0	KAMINSKY #1-25, Noble P&A Well, Actual VES Surveys V0
Newnam 2A-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0	JIM CREEK #1-25, Noble P&A Well, No Surveys V0
Newnam 2I-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0	NGL CSB, NGL LJ Well, Actual Total Surveys V0
Newnam 2K-32H-C264, CPR PR Well, Actual SDI Surveys V0	KIWI 2920-0H, Wellbore #1, Design #2 V0	