

# **VERDAD RESOURCES**

**WATTENBERG FIELD**

**8N-60W-14 SCHNEIDER 1414 PAD**

**SCHNEIDER 1414-05H**

**Plan A**

**Permit Rev-1**

## **Anticollision Summary Report**

**22 July, 2021**

## Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well SCHNEIDER 1414-05H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Reference Site:</b>	8N-60W-14 SCHNEIDER 1414 PAD	<b>MD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SCHNEIDER 1414-05H	<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>	Permit Rev-1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Permit Rev-1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 25.00usft	<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>	7/22/2021			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.00	1,800.00	Permit Rev-1 (Plan A)	ISCWSA MWD	Fixed:v2:standard declination	
1,800.00	12,060.00	Permit Rev-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>						
8N-60W-11 SONIC STAR 1101 PAD						
SONIC STAR 1101-01H - Plan B - Design #2	7,215.10	5,968.60	1,230.46	1,185.17	27.169	CC
SONIC STAR 1101-01H - Plan B - Design #2	7,225.00	5,964.41	1,230.52	1,185.09	27.086	ES
SONIC STAR 1101-01H - Plan B - Design #2	8,075.00	5,778.24	1,493.66	1,412.78	18.467	SF
SONIC STAR 1101-03H - Plan B - Design #2						Out of range
SONIC STAR 1101-05H - Plan B - Design #2						Out of range
SONIC STAR 1101-07H - Plan B - Design #2						Out of range
SONIC STAR 1101-09H - Plan B - Design #2						Out of range
SONIC STAR 1101-11H - Plan B - Design #2						Out of range
SONIC STAR 1101-13H - Plan B - Design #2						Out of range
SONIC STAR 1101-16H - Plan B - Design #2						Out of range
<b>8N-60W-12 Offsets</b>						
COLORADO NATIONAL BANK #1 - Shell P&A Well - No						Out of range

# Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well SCHNEIDER 1414-05H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Reference Site:</b>	8N-60W-14 SCHNEIDER 1414 PAD	<b>MD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SCHNEIDER 1414-05H	<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>	Permit Rev-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						
8N-60W-14 Offsets						
BOOMSLANG FED 8-60 14A-13-18-1 - Bison Planned W	6,950.00	5,900.00	932.83	851.49	11.468	SF
BOOMSLANG FED 8-60 14A-13-18-1 - Bison Planned W	7,460.48	5,900.00	774.87	718.98	13.865	CC, ES
BOOMSLANG FED 8-60 14A-13-18-2 - Bison PR Well - A	7,294.88	5,900.86	720.10	674.59	15.824	CC, ES
BOOMSLANG FED 8-60 14A-13-18-2 - Bison PR Well - A	7,850.00	5,911.23	909.12	835.06	12.275	SF
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well - A	7,909.36	5,904.34	684.98	636.97	14.267	CC
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well - A	7,950.00	5,902.38	686.18	636.09	13.698	ES
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well - A	8,375.00	5,882.53	827.78	749.52	10.577	SF
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well - A	8,584.56	5,857.00	675.55	617.34	11.605	CC
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well - A	8,650.00	5,857.00	678.71	615.49	10.736	ES
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well - A	8,925.00	5,857.00	756.48	672.94	9.055	SF
BOOMSLANG FED 8-60 14A-13-18-5 - Bison PR Well - A	9,105.68	5,897.60	658.25	584.81	8.963	CC
BOOMSLANG FED 8-60 14A-13-18-5 - Bison PR Well - A	9,175.00	5,904.05	661.83	582.47	8.340	ES
BOOMSLANG FED 8-60 14A-13-18-5 - Bison PR Well - A	9,450.00	5,952.00	742.13	642.49	7.448	SF
BOOMSLANG FED 8-60 14A-13-18-6 - Bison Planned W	9,570.84	5,951.56	765.60	668.96	7.923	CC
BOOMSLANG FED 8-60 14A-13-18-6 - Bison Planned W	9,650.00	5,951.32	769.68	665.84	7.412	ES
BOOMSLANG FED 8-60 14A-13-18-6 - Bison Planned W	9,875.00	5,950.66	823.80	703.35	6.839	SF
BOOMSLANG FED 8-60 14B-13-18-1 - Bison Planned W	9,787.11	5,900.00	766.47	670.15	7.957	CC
BOOMSLANG FED 8-60 14B-13-18-1 - Bison Planned W	9,850.00	5,900.00	769.05	668.10	7.618	ES
BOOMSLANG FED 8-60 14B-13-18-1 - Bison Planned W	10,050.00	5,900.00	810.30	697.24	7.167	SF
BOOMSLANG FED 8-60 14B-13-18-2 - Bison PR Well - A	9,995.98	5,948.00	666.54	575.23	7.299	CC
BOOMSLANG FED 8-60 14B-13-18-2 - Bison PR Well - A	10,050.00	5,948.00	668.73	572.41	6.943	ES
BOOMSLANG FED 8-60 14B-13-18-2 - Bison PR Well - A	10,250.00	5,909.61	711.00	600.69	6.446	SF
BOOMSLANG FED 8-60 14B-13-18-3 - Bison PR Well - A	10,640.84	5,789.20	699.59	599.40	6.982	CC
BOOMSLANG FED 8-60 14B-13-18-3 - Bison PR Well - A	10,700.00	5,785.67	702.07	596.75	6.666	ES
BOOMSLANG FED 8-60 14B-13-18-3 - Bison PR Well - A	10,900.00	5,757.00	746.06	628.00	6.319	SF
BOOMSLANG FED 8-60 14B-13-18-4 - Bison PR Well - A	11,185.48	5,851.00	663.32	550.06	5.856	CC
BOOMSLANG FED 8-60 14B-13-18-4 - Bison PR Well - A	11,250.00	5,851.00	666.46	547.06	5.582	ES
BOOMSLANG FED 8-60 14B-13-18-4 - Bison PR Well - A	11,400.00	5,851.00	697.15	566.81	5.349	SF
BOOMSLANG FED 8-60 14B-13-18-5 - Bison PR Well - A	11,845.14	5,889.20	667.04	532.46	4.957	CC
BOOMSLANG FED 8-60 14B-13-18-5 - Bison PR Well - A	11,900.00	5,894.94	669.24	529.19	4.778	ES
BOOMSLANG FED 8-60 14B-13-18-5 - Bison PR Well - A	12,025.00	5,908.00	690.35	540.53	4.608	SF
BOOMSLANG FED 8-60 14B-13-18-6 - Bison Planned W	11,696.84	5,837.64	773.54	643.61	5.953	CC
BOOMSLANG FED 8-60 14B-13-18-6 - Bison Planned W	11,750.00	5,839.52	775.36	640.69	5.757	ES
BOOMSLANG FED 8-60 14B-13-18-6 - Bison Planned W	11,925.00	5,845.90	806.40	659.72	5.498	SF
HNIZDIL 1-14 - Gemini D/A Well - No Surveys	11,500.00	6,067.00	1,025.33	701.99	3.171	SF
HNIZDIL 1-14 - Gemini D/A Well - No Surveys	11,550.00	6,067.00	1,022.40	700.35	3.175	ES
HNIZDIL 1-14 - Gemini D/A Well - No Surveys	11,584.93	6,067.00	1,021.80	700.78	3.183	CC
SCHNEIDER 1-14-8-60 - Verdad PR Well - Actual Precis	0.00	0.00	99.53			
SCHNEIDER 1-14-8-60 - Verdad PR Well - Actual Precis	25.00	23.91	99.54	92.02	13.230	SF
SCHNEIDER 2-14-8-60 - Verdad PR Well - Actual Precis	200.00	199.00	84.53	74.30	8.265	CC
SCHNEIDER 2-14-8-60 - Verdad PR Well - Actual Precis	325.00	323.98	86.40	72.12	6.049	ES
SCHNEIDER 2-14-8-60 - Verdad PR Well - Actual Precis	700.00	696.76	123.95	96.39	4.497	SF

## Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well SCHNEIDER 1414-05H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Reference Site:</b>	8N-60W-14 SCHNEIDER 1414 PAD	<b>MD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SCHNEIDER 1414-05H	<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>	Permit Rev-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
<b>Offset Well - Wellbore - Design</b>						
8N-60W-14 SCHNEIDER 1414 PAD						
SCHNEIDER 1414-01H - Plan A - Permit Rev-1	200.00	200.00	64.00	56.43	8.456	CC
SCHNEIDER 1414-01H - Plan A - Permit Rev-1	225.00	225.00	64.00	56.42	8.437	ES
SCHNEIDER 1414-01H - Plan A - Permit Rev-1	250.00	250.00	64.15	56.54	8.434	SF
SCHNEIDER 1414-02H - Plan A - Permit Rev-1	200.00	200.00	47.99	40.42	6.341	CC
SCHNEIDER 1414-02H - Plan A - Permit Rev-1	225.00	225.00	48.00	40.41	6.327	ES, SF
SCHNEIDER 1414-03H - Plan A - Permit Rev-1	200.00	200.00	31.99	24.42	4.226	CC
SCHNEIDER 1414-03H - Plan A - Permit Rev-1	225.00	225.00	31.99	24.40	4.217	ES, SF
SCHNEIDER 1414-04H - Plan A - Permit Rev-1	200.00	200.00	15.98	8.41	2.111	CC
SCHNEIDER 1414-04H - Plan A - Permit Rev-1	225.00	225.00	15.98	8.40	2.107	ES
SCHNEIDER 1414-04H - Plan A - Permit Rev-1	1,550.00	1,558.38	30.00	14.86	1.982	SF
SCHNEIDER 1414-06H - Plan A - Permit Rev-1	200.00	200.00	16.01	8.44	2.115	CC, ES
SCHNEIDER 1414-06H - Plan A - Permit Rev-1	1,800.00	1,788.54	30.34	11.80	1.637	SF
8N-60W-22 Offsets Incomplete						
HALE 8-60 22-23-1 - Bison Plan - Now PR - No COGCC						Out of range
8N-60W-26 Offsets Incomplete						
*DUELL B #1 (GL NOT AVAILABLE) - Williamson P&A W						Out of range
DUELL #1-26 - J & L Oil DA Well - No Surveys						Out of range
EWS 1B - Expedition Water Solutions Planned Well - Pla						Out of range
HEMBERGER 2-26-34-8-60 - Verdad PR Well - Actual Pr						Out of range
HEMBERGER 4-26-8-60 - Verdad PR Well - Actual Preci						Out of range
HEMBERGER 5-26-8-60 - Verdad PR Well - Actual Preci						Out of range
HEMBERGER 6-26-8-60 - Verdad PR Well - Actual Preci						Out of range
9N-60W-35 Offsets Incomplete						
PINTAIL FED 2-11-1HN - Mallard Drilled Well No COGCC						Out of range
PINTAIL FED 2-11-2HN - Mallard Drilled Well No COGCC						Out of range
PINTAIL FED 2-11-3HC - Mallard Planned Well - Planned						Out of range
PINTAIL FED 2-11-4HN - Mallard Drilled Well No COGCC						Out of range
PINTAIL FED 2-11-5HN - Mallard Drilled Well No COGCC						Out of range
PINTAIL FED 2-11-6HN - Mallard Drilled Well No COGCC	6,344.84	16,942.00	1,266.20	1,012.12	4.983	CC
PINTAIL FED 2-11-6HN - Mallard Drilled Well No COGCC	6,450.00	16,964.03	1,270.37	1,008.05	4.843	ES
PINTAIL FED 2-11-6HN - Mallard Drilled Well No COGCC	6,600.00	17,006.97	1,288.86	1,017.94	4.757	SF
PINTAIL FED 2-11-7HN - Mallard Drilled Well No COGCC	6,657.72	17,255.29	696.73	449.54	2.819	CC
PINTAIL FED 2-11-7HN - Mallard Drilled Well No COGCC	6,700.00	17,255.29	698.17	447.47	2.785	ES
PINTAIL FED 2-11-7HN - Mallard Drilled Well No COGCC	6,750.00	17,255.29	703.57	450.13	2.776	SF
PINTAIL FED 2-11-8HN - Mallard Drilled Well No COGCC	6,830.08	17,549.49	333.96	176.16	2.116	CC
PINTAIL FED 2-11-8HN - Mallard Drilled Well No COGCC	6,850.00	17,549.49	334.85	176.12	2.110	ES, SF
PINTAIL FED 2-11-9HN - Mallard Planned Well - Planned	6,940.56	17,926.13	773.52	494.23	2.770	CC
PINTAIL FED 2-11-9HN - Mallard Planned Well - Planned	6,975.00	17,926.13	775.04	492.45	2.743	ES
PINTAIL FED 2-11-9HN - Mallard Planned Well - Planned	7,025.00	17,926.13	782.65	496.17	2.732	SF

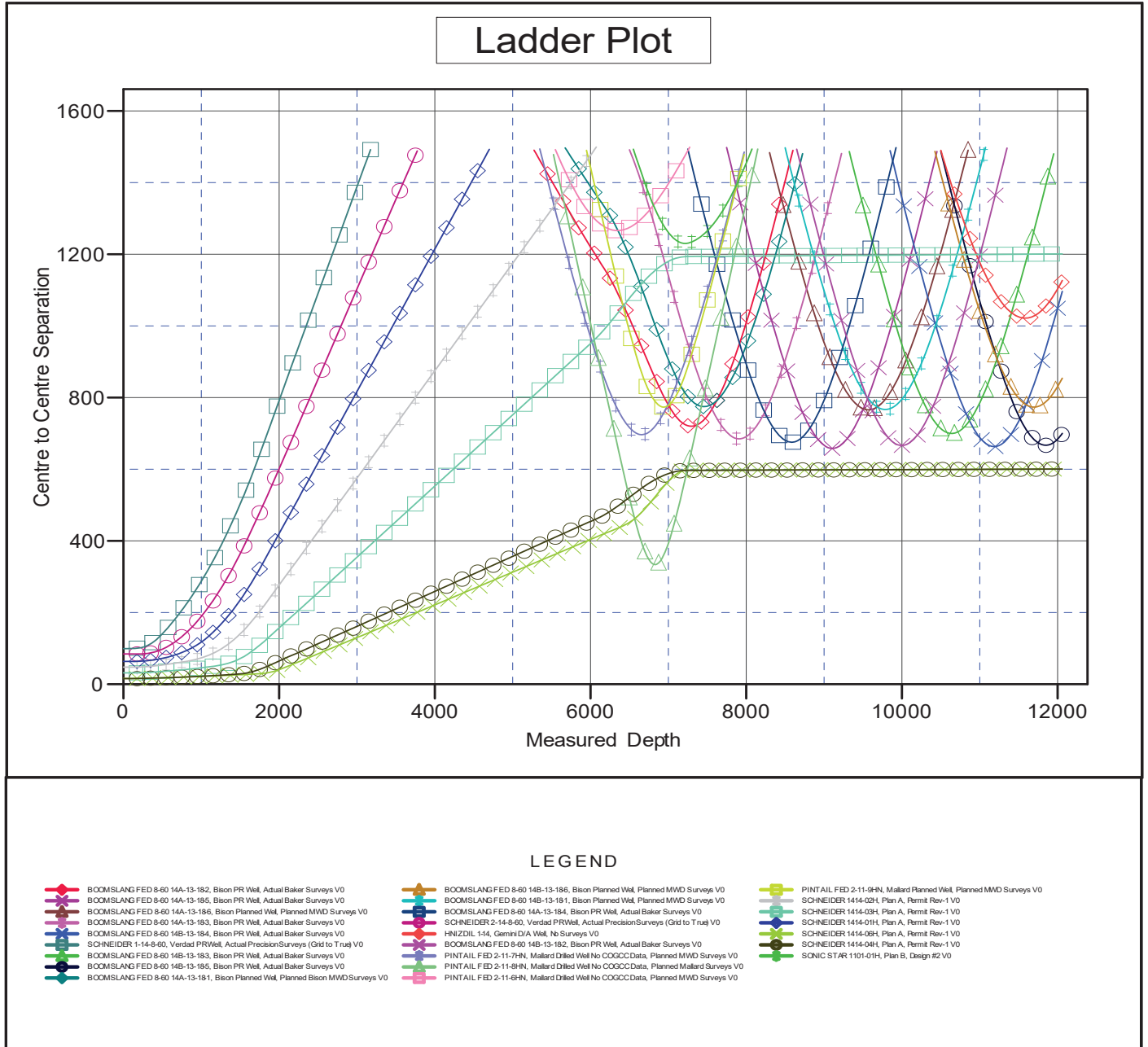
## Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well SCHNEIDER 1414-05H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Reference Site:</b>	8N-60W-14 SCHNEIDER 1414 PAD	<b>MD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SCHNEIDER 1414-05H	<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>	Permit Rev-1	<b>Offset TVD Reference:</b>	Offset Datum

Coordinates are relative to: SCHNEIDER 1414-05H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.93°



## Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well SCHNEIDER 1414-05H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Reference Site:</b>	8N-60W-14 SCHNEIDER 1414 PAD	<b>MD Reference:</b>	RKB = 20' @ 4963.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	SCHNEIDER 1414-05H	<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>	Permit Rev-1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to RKB = 20' @ 4963.00usft (RIG)

Offset Depths are relative to Offset Datum

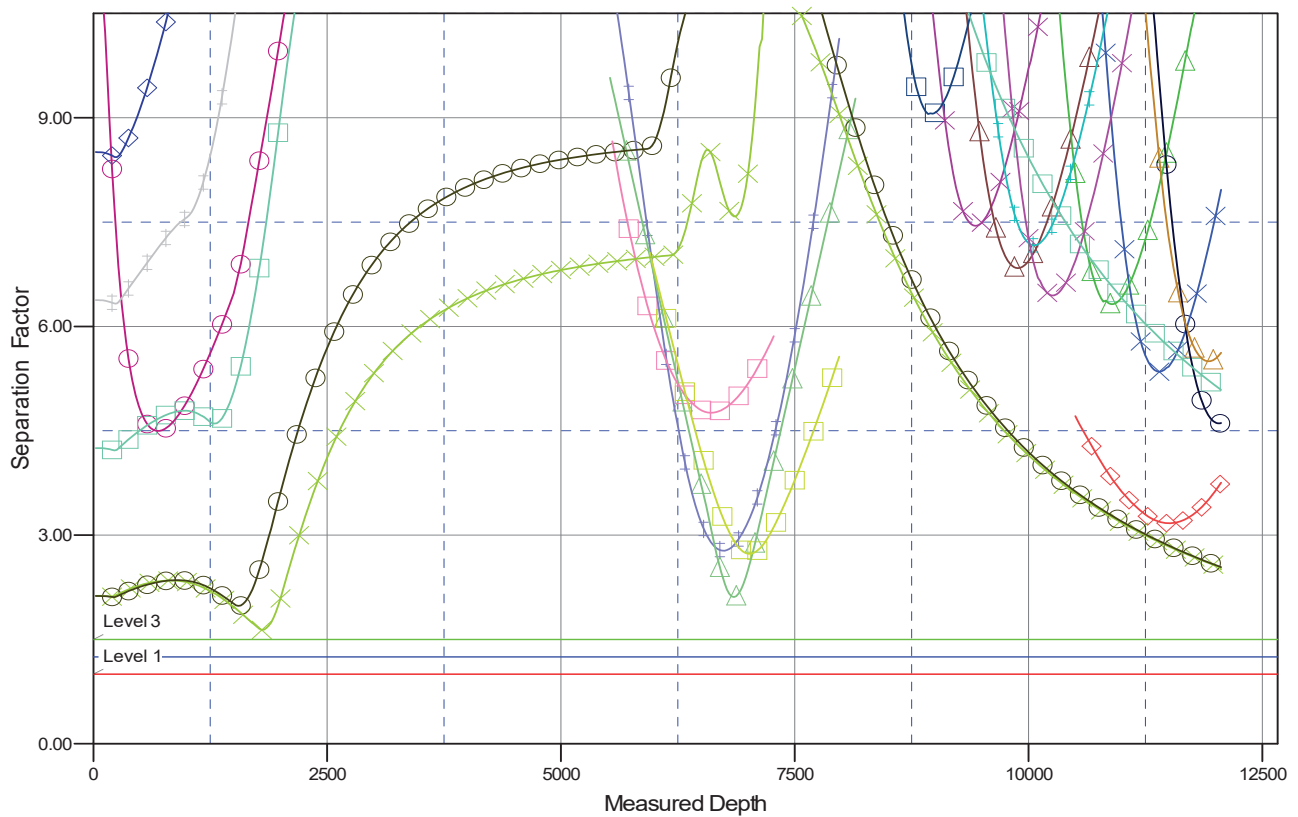
Central Meridian is -105.500000

Coordinates are relative to: SCHNEIDER 1414-05H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.93°

### Separation Factor Plot



#### LEGEND

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>BOOMSLANG FED 8-60 14A-13-182, Bison PR Well, Actual Baker Surveys V0</li> <li>BOOMSLANG FED 8-60 14A-13-185, Bison PR Well, Actual Baker Surveys V0</li> <li>BOOMSLANG FED 8-60 14A-13-186, Bison Planned Well, Planned MWD Surveys V0</li> <li>BOOMSLANG FED 8-60 14A-13-183, Bison PR Well, Actual Baker Surveys V0</li> <li>BOOMSLANG FED 8-60 14B-13-184, Bison PR Well, Actual Baker Surveys V0</li> <li>SCHNEIDER 1-14-8-60, Verdad PR Well, Actual Precision Surveys (Grid to True) V0</li> <li>BOOMSLANG FED 8-60 14B-13-183, Bison PR Well, Actual Baker Surveys V0</li> <li>BOOMSLANG FED 8-60 14B-13-185, Bison PR Well, Actual Baker Surveys V0</li> <li>BOOMSLANG FED 8-60 14A-13-181, Bison Planned Well, Planned MWD Surveys V0</li> </ul> | <ul style="list-style-type: none"> <li>BOOMSLANG FED 8-60 14B-13-186, Bison Planned Well, Planned MWD Surveys V0</li> <li>BOOMSLANG FED 8-60 14B-13-181, Bison Planned Well, Planned MWD Surveys V0</li> <li>BOOMSLANG FED 8-60 14A-13-184, Bison PR Well, Actual Baker Surveys V0</li> <li>SCHNEIDER 2-14-8-60, Verdad PR Well, Actual Precision Surveys (Grid to True) V0</li> <li>HINZDL 144, Gemini D/A Well, No Surveys V0</li> <li>BOOMSLANG FED 8-60 14B-13-182, Bison PR Well, Actual Baker Surveys V0</li> <li>PINTAIL FED 2-11-7-HN, Mallard Drilled Well No COGOC Data, Planned MWD Surveys V0</li> <li>PINTAIL FED 2-11-8-HN, Mallard Drilled Well No COGOC Data, Planned MWD Surveys V0</li> <li>PINTAIL FED 2-11-6-HN, Mallard Drilled Well No COGOC Data, Planned MWD Surveys V0</li> </ul> | <ul style="list-style-type: none"> <li>PINTAIL FED 2-11-9-HN, Mallard Planned Well, Planned MWD Surveys V0</li> <li>SCHNEIDER 1414-02H, Plan A, Permit Rev-1 V0</li> <li>SCHNEIDER 1414-03H, Plan A, Permit Rev-1 V0</li> <li>SCHNEIDER 1414-01H, Plan A, Permit Rev-1 V0</li> <li>SCHNEIDER 1414-06H, Plan A, Permit Rev-1 V0</li> <li>SCHNEIDER 1414-04H, Plan A, Permit Rev-1 V0</li> <li>SONIC STAR 1101-01H, Plan B, Design #2 V0</li> </ul> |
|---|--|---|