

VERDAD RESOURCES

WATTENBERG FIELD

2N-63W-19 KBL PAD

KBL 1918-13H

Plan A

Design #1

Anticollision Summary Report

17 September, 2024

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well KBL 1918-13H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 21' @ 4882.00usft (RIG)
Reference Site:	2N-63W-19 KBL PAD	MD Reference:	RKB = 21' @ 4882.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	KBL 1918-13H	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:	Reference 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	9/17/2024			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	1,816.00	Design #1 (Plan A)	ISCWSA MWD	Fixed:v2:standard declination	
1,816.00	13,015.99	Design #1 (Plan A)	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-63W-08 OFFSETS						
FEDERAL 14 - NOBLE P&A Well - No Surveys						Out of range
L F RANCHES 2-A - VOG P&A Well - No Surveys						Out of range
2N-63W-17 Offsets						
CHAMPLIN #1-17 - Rex Family D/A Well - No Surveys						Out of range
EWS #4A - EWS IJ Well - No Surveys						Out of range
PHILLIP #1 - EMC P&A Well - No Surveys						Out of range
UPRR 34 PAN AM #1 - Amoco D/A Well - No Surveys						Out of range
UPV #17-1K3 - Patina D/A Well - No Surveys						Out of range
UPV #17-3K3 - Snyder D/A Well - No Surveys						Out of range
2N-63W-18 Offsets						
CUYKENDALL-LAUCK #1 - Habersham Energy P&A We						Out of range
CUYKENDALL-LAUCK #2 - ARCH SI Well - No Surveys						Out of range
CUYKENDALL-LAUCK #3 - Sands-American P&A Well -						Out of range
ELMER KAUFMAN #1 - Sands-American P&A Well - No						Out of range
ELMER KAUFMAN #2 - ARCH SI Well - No Surveys						Out of range
ELMER KAUFMAN #3 - US Minerals P&A Well - No Surv						Out of range
EWS #4 - EWS 4 IJ Well - No Surveys						Out of range
EWS 4B - EWS IJ Well - Actual Ensign Surveys						Out of range
GUTTERSEN #YY18-715 - NOBLE Drilled Well - No EC						Out of range
GUTTERSEN #YY18-726 - NOBLE Drilled Well - No EC						Out of range
GUTTERSEN #YY18-736 - NOBLE Drilled Well - No EC						Out of range
GUTTERSEN #YY18-746 - NOBLE Drilled Well - No EC						Out of range
GUTTERSEN #YY18-754 - NOBLE Drilled Well - No EC						Out of range
GUTTERSEN #YY18-764 - NOBLE Drilled Well - No EC	13,015.99	7,254.44	1,262.67	1,081.52	6.970	CC, ES, SF
GUTTERSEN #YY18-775 - NOBLE Drilled Well - No EC	13,015.99	7,430.00	614.99	433.66	3.392	CC, ES, SF
GUTTERSEN #YY18-785 - NOBLE Drilled Well - No EC	13,015.99	7,574.41	120.98	9.45	1.085	Level 2, CC, ES, SF
JOHN CUYKENDALL UNIT #2 - NOBLE P&A Well - No S						Out of range
KAUFMAN #4 - ARCH SI Well - No Surveys						Out of range

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Reference Wellbore	Plan A	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Reference 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-63W-19 KBL PAD						
KBL 1830-17H - Plan A - Design #1	264.34	264.34	60.13	52.51	7.895	CC
KBL 1830-17H - Plan A - Design #1	300.00	299.98	60.13	52.49	7.862	ES
KBL 1830-17H - Plan A - Design #1	400.20	399.71	60.71	52.94	7.813	SF
KBL 1830-18H - Plan A - Design #1	251.83	251.82	75.23	67.62	9.892	CC, ES
KBL 1830-18H - Plan A - Design #1	400.20	399.25	76.24	68.46	9.810	SF
KBL 1830-19H - Plan A - Design #1	116.63	116.63	90.06	82.52	11.958	CC
KBL 1830-19H - Plan A - Design #1	200.20	200.00	90.06	82.49	11.899	ES
KBL 1830-19H - Plan A - Design #1	300.00	299.30	90.42	82.78	11.823	SF
KBL 1918-14H - Plan A - Design #1	206.62	206.62	15.10	7.53	1.994	CC, ES
KBL 1918-14H - Plan A - Design #1	300.00	299.98	15.20	7.55	1.987	SF
KBL 1918-15H - Plan A - Design #1	245.40	245.39	30.20	22.60	3.974	CC
KBL 1918-15H - Plan A - Design #1	300.00	299.98	30.23	22.58	3.953	ES, SF
KBL 1918-16H - Plan A - Design #1	246.42	246.42	45.02	37.42	5.924	CC
KBL 1918-16H - Plan A - Design #1	300.00	299.98	45.05	37.40	5.889	ES
KBL 1918-16H - Plan A - Design #1	400.20	400.04	45.51	37.73	5.856	SF
KBL 1930-07H - VERDAD PR Well - Actual SLB Surveys	223.94	222.95	74.13	66.53	9.760	CC, ES
KBL 1930-07H - VERDAD PR Well - Actual SLB Surveys	8,400.00	7,356.64	322.72	204.67	2.734	SF
KBL 1930-08H - VERDAD PR Well - Actual SLB Surveys	152.09	151.09	59.75	52.20	7.914	CC, ES
KBL 1930-08H - VERDAD PR Well - Actual SLB Surveys	7,384.38	7,922.95	177.23	114.39	2.820	SF
KBL 1930-09H - VERDAD PR Well - Actual SLB Surveys	0.00	0.00	45.04			
KBL 1930-09H - VERDAD PR Well - Actual SLB Surveys	227.28	226.30	45.33	37.73	5.965	SF
KBL 1930-11H - VERDAD PR Well - Actual SLB Surveys	221.63	220.63	29.39	21.80	3.871	CC, ES, SF
KBL 1930-12H - VERDAD PR Well - Actual SLB Surveys	227.69	226.71	14.15	6.55	1.862	CC, ES, SF
2N-63W-19 Offsets						
BERGLUND #1 - Texaco P/A Well - No Surveys	10,000.00	6,692.00	201.01	-122.24	0.622	Level 1, ES
BERGLUND #1 - Texaco P/A Well - No Surveys	10,071.41	6,692.00	187.90	-120.13	0.610	Level 1, CC, SF
BERGLUND MYERS #42-19 - Simmons Energy D/A We						Out of range
BERGLUND-MYERS #1 - Barrett Resources P/A Well - N	9,600.00	6,685.00	1,191.52	887.37	3.918	SF
BERGLUND-MYERS #1 - Barrett Resources P/A Well - N	9,700.00	6,685.00	1,183.08	881.08	3.918	ES
BERGLUND-MYERS #1 - Barrett Resources P/A Well - N	9,750.27	6,685.00	1,182.01	881.20	3.929	CC
OSCAR & JENNIE BERGLUND #1 - Amoco D/A Well - N						Out of range
2N-63W-20 Offsets						
WRIGHT #1 - Summit D/A Well - No Surveys						Out of range
2N-63W-30 Offsets						
LAUCK #1 - Siler Earl F DA Well - No Surveys						Out of range
2N-64W-24 ARNOLD-BOYD PAD						
BOYD 2413-11H - Plan A - Design #1	13,015.99	14,962.86	971.55	674.92	3.275	CC, ES, SF
2N-64W-24 ARNOLD-HELEN PAD						
HELEN 2536-12H - VERDAD PR Well - Actual SLB Surv						Out of range

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Reference Design:	Design #1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to RKB = 21' @ 4882.00usft (RIG)

Offset Depths are relative to Offset Datum

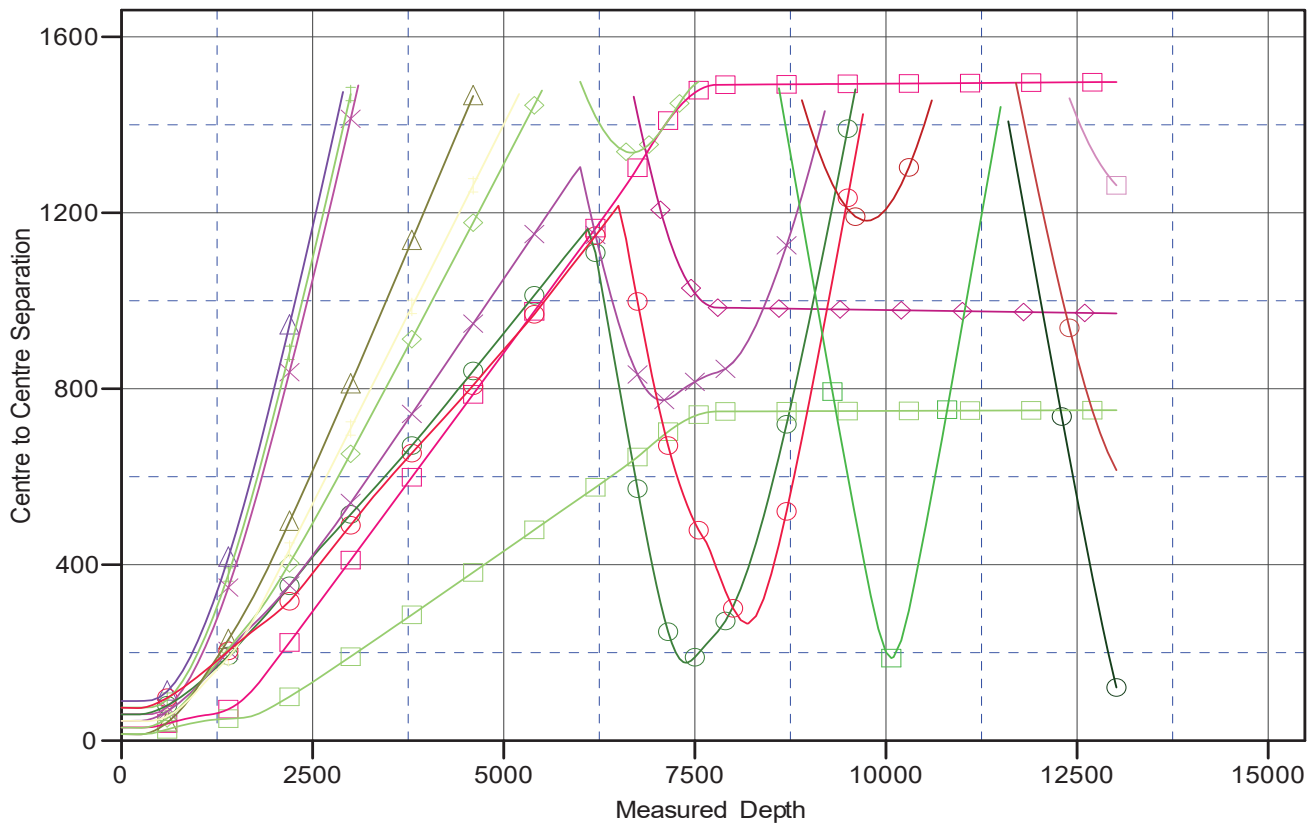
Central Meridian is -105.500000

Coordinates are relative to: KBL 1918-13H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.66°

Ladder Plot



LEGEND

JOYD 2413-11H, Plan A, Design #1 V0	KBL 1930-11H, VERDAD PR Well, Actual SLB Surveys V0	GUTTERSEN #Y18-764, NOBLE Drilled Well - No ECMCActual Surveys, BKRPanned Well - Low I
KBL 1930-19H, Plan A, Design #1 V0	KBL 1930-19H, VERDAD PR Well, Actual SLB Surveys V0	GUTTERSEN #Y18-775, NOBLE Drilled Well - No ECMCActual Surveys, BKRPanned Well - Low I
KBL 1918-19H, Plan A, Design #1 V0	KBL 1918-19H, Plan A, Design #1 V0	GUTTERSEN #Y18-785, NOBLE Drilled Well - No ECMCActual Surveys, BKRPanned Well - Low I
KBL 1930-17H, Plan A, Design #1 V0	KBL 1918-14H, Plan A, Design #1 V0	BERGLUND#1, Texaco P/A Well, No Surveys V0
KBL 1930-08H, VERDAD PR Well, Actual SLB Surveys V0	KBL 1930-15H, Plan A, Design #1 V0	BERGLUNDMYERS #1, Barrett Resources P/A Well, No Surveys V0
KBL 1930-08H, VERDAD PR Well, Actual SLB Surveys V0	KBL 1930-07H, VERDAD PR Well, Actual SLB Surveys V0	

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Offset Depths are relative to Offset Datum

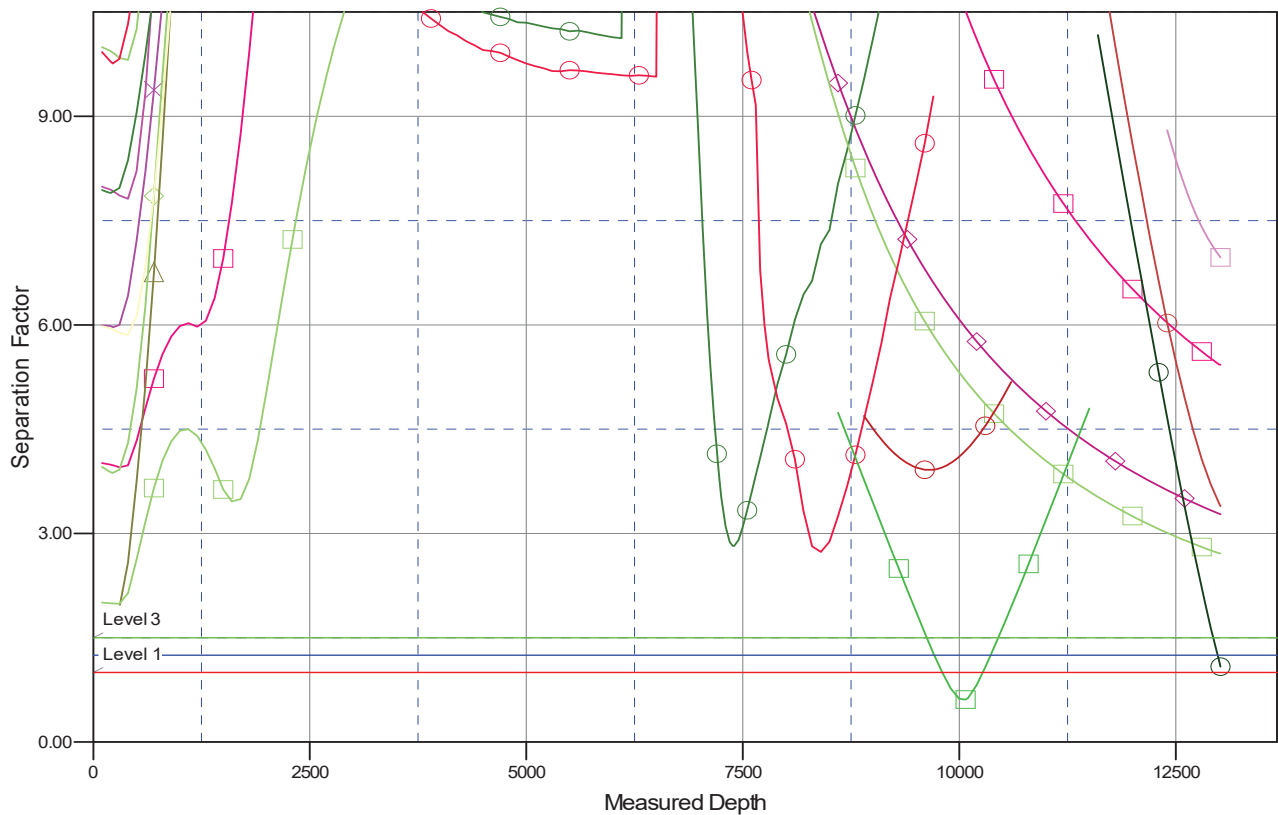
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Separation Factor Plot



LEGEND

● KBL 1930-11H, Plan A, Design #1 V0	● KBL 1930-13H, VERDAD PR Well, Actual SLB Surveys V0	● GUTTERSEN #Y18-754, NOBLE Drilled Well - No ECM/Actual Surveys, BKRP/Planned Well - Low
● KBL 1930-13H, Plan A, Design #1 V0	● KBL 1930-13H, VERDAD PR Well, Actual SLB Surveys V0	● GUTTERSEN #Y18-775, NOBLE Drilled Well - No ECM/Actual Surveys, BKRP/Planned Well - Low
● KBL 1918-13H, Plan A, Design #1 V0	● KBL 1918-13H, Plan A, Design #1 V0	● GUTTERSEN #Y18-785, NOBLE Drilled Well - No ECM/Actual Surveys, BKRP/Planned Well - Low
● KBL 1930-08H, VERDAD PR Well, Actual SLB Surveys V0	● KBL 1930-08H, VERDAD PR Well, Actual SLB Surveys V0	● BERGLUND #1, Texaco P/A Well, No Surveys V0
● KBL 1930-07H, VERDAD PR Well, Actual SLB Surveys V0	● KBL 1930-07H, VERDAD PR Well, Actual SLB Surveys V0	● BERGLUND MYERS #1, Barrett Resources P/A Well, No Surveys V0