

VERDAD RESOURCES

**WATTENBERG FIELD
2N-64W-28 GEORGENE PAD
GEORGENE 2828-04H**

**Wellbore #1
Design #3**

Anticollision Summary Report

17 November, 2020

HP

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well GEORGENE 2828-04H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 24' @ 5041.00usft (RIG)
Reference Site:	2N-64W-28 GEORGENE PAD	MD Reference:	RKB = 24' @ 5041.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	GEORGENE 2828-04H	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 #3	Offset TVD Reference:	Offset Datum

Reference	Design #3		
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	11/17/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	1,700.00	Design #3 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination	
1,700.00	12,557.94	Design #3 (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-28 GEORGENE PAD						
GEORGENE 2828-01H - Wellbore #1 - Design #2	200.00	199.00	45.02	37.45	5.949	CC, ES
GEORGENE 2828-01H - Wellbore #1 - Design #2	11,300.00	10,969.39	1,485.32	1,227.50	5.761	SF
GEORGENE 2828-02H - Wellbore #1 - Design #2	300.00	299.00	30.01	22.36	3.922	CC, ES
GEORGENE 2828-02H - Wellbore #1 - Design #2	12,557.94	12,298.76	1,120.25	766.14	3.164	SF
GEORGENE 2828-03H - Wellbore #1 - Design #2	400.00	399.00	15.02	7.23	1.930	CC, ES
GEORGENE 2828-03H - Wellbore #1 - Design #2	12,557.94	12,394.30	560.11	205.78	1.581	SF
GEORGENE 2833-01H - Wellbore #1 - Design #3	499.00	500.00	60.00	52.05	7.546	CC
GEORGENE 2833-01H - Wellbore #1 - Design #3	500.00	501.00	60.00	52.05	7.545	ES, SF
GEORGENE 2833-02H - Wellbore #1 - Design #3	499.00	500.00	44.99	37.03	5.658	CC
GEORGENE 2833-02H - Wellbore #1 - Design #3	500.00	501.00	44.99	37.03	5.656	ES, SF
GEORGENE 2833-03H - Wellbore #1 - Design #3	400.00	400.00	29.98	22.20	3.852	CC, ES
GEORGENE 2833-03H - Wellbore #1 - Design #3	499.00	498.70	30.45	22.50	3.832	SF
GEORGENE 2833-04H - Wellbore #1 - Design #4	200.00	200.00	14.98	7.41	1.980	CC, ES, SF
2N-64W-28 Offsets Incomplete						
BRNAK 34-28 - Noble SI Well - No Surveys	499.00	448.00	1,410.53	1,391.77	75.174	CC
BRNAK 34-28 - Noble SI Well - No Surveys	9,325.06	7,029.00	1,421.38	1,104.97	4.492	ES
BRNAK 34-28 - Noble SI Well - No Surveys	9,400.00	7,029.00	1,423.36	1,105.43	4.477	SF
BRNAK 44-28 - Noble SI Well - No Surveys	1,279.54	1,238.92	281.86	233.59	5.839	CC
BRNAK 44-28 - Noble SI Well - No Surveys	1,400.00	1,354.22	284.01	231.08	5.366	ES
BRNAK 44-28 - Noble SI Well - No Surveys	1,800.00	1,732.60	326.38	258.16	4.784	SF
BRNAK 77-28 - Noble P&A Well - No Surveys	8,666.44	7,021.00	762.16	466.12	2.574	CC, ES
BRNAK 77-28 - Noble P&A Well - No Surveys	8,700.00	7,021.00	762.90	466.37	2.573	SF
GREER 13-28 - Noble SI Well - No Surveys	12,077.12	7,021.00	151.00	-258.52	0.369	Level 1, CC, ES, SF
GREER 14-28 - Noble T/A Well - No Surveys	11,962.98	7,045.00	1,461.66	1,055.12	3.595	CC
GREER 14-28 - Noble T/A Well - No Surveys	12,000.23	7,045.00	1,462.14	1,054.57	3.588	ES
GREER 14-28 - Noble T/A Well - No Surveys	12,100.00	7,045.00	1,467.42	1,057.62	3.581	SF
GREER 23-28 - Noble SI Well - No Surveys	10,352.39	7,006.00	151.00	-198.07	0.433	Level 1, CC, ES, SF
GREER 24-28 - Noble T/A Well - No Surveys						Out of range
STONEBRAKER 32-28 - PDC P&A Well - No Surveys	9,453.76	6,979.00	1,190.19	871.45	3.734	CC
STONEBRAKER 32-28 - PDC P&A Well - No Surveys	9,500.00	6,979.00	1,191.09	870.29	3.713	ES
STONEBRAKER 32-28 - PDC P&A Well - No Surveys	9,600.00	6,979.00	1,199.14	874.15	3.690	SF
STONEBRAKER 42-28 - PDC P&A Well - No Surveys	7,759.19	6,988.74	1,180.89	906.49	4.304	CC, ES
STONEBRAKER 42-28 - PDC P&A Well - No Surveys	7,800.00	6,989.00	1,181.87	907.14	4.302	SF
STONEBREAKER 28V-234 - PDC PR Well - Actual Ensig	12,169.10	11,319.00	1,348.37	1,017.60	4.076	CC
STONEBREAKER 28V-234 - PDC PR Well - Actual Ensig	12,200.00	11,319.00	1,348.72	1,017.00	4.066	ES

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Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #3	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-28 Offsets Incomplete						
STONEBREAKER 28V-234 - PDC PR Well - Actual Ensig	12,300.00	11,319.00	1,354.71	1,021.06	4.060	SF
STONEBREAKER 28W-304 - PDC PR Well - Actual Ens	12,116.41	11,403.00	708.16	379.61	2.155	CC, ES, SF
2N-64W-29 Offsets						
BAUMGARTNER #14-29 - Noble SI Well - No Surveys						Out of range
BELL #41-29 - Noble PR Well - No Surveys						Out of range
Bell USX #Y29-03 - Noble PR Well - No Surveys						Out of range
JIM CREEK #1-29 - Noble P&A Well - No Surveys						Out of range
KAMINSKY #1-29 - Noble P&A Well - Actual VES Survey						Out of range
NGL C5 - NGL IJ Well - No Surveys						Out of range
NGL C5A - NGL IJ Well - Actual Ensign Surveys	12,557.94	7,680.40	451.61	374.74	5.875	CC, ES, SF
NGL C5B - NGL IJ Well - Actual Total Surveys						Out of range
PARKER #29-34 - Noble SI Well - Actual Coretech Surve						Out of range
2N-64W-33 Offsets						
JACKSON 33-1H - Verdad Planned Well - Surcon MWD						Out of range
JACKSON 33-2H - Verdad Planned Well - Surcon MWD						Out of range
JACKSON 33-3H - Verdad Planned Well - Surcon MWD						Out of range
JACKSON 33-4H - Verdad Planned Well - Surcon MWD						Out of range
JACKSON 33-5H - Verdad Planned Well - Surcon MWD						Out of range
JACKSON 33-6H - Verdad PR Well - Actual BHI Surveys						Out of range
JACKSON 33-7H - Verdad PR Well - Actual BHI Surveys	10,454.65	6,886.00	1,477.64	1,350.16	11.591	CC
JACKSON 33-7H - Verdad PR Well - Actual BHI Surveys	10,500.00	6,886.00	1,478.68	1,349.83	11.476	ES
JACKSON 33-7H - Verdad PR Well - Actual BHI Surveys	10,600.00	6,886.00	1,488.32	1,356.77	11.314	SF
JACKSON 33-S1H - Verdad Planned Well - Surcon MWD						Out of range
JACKSON 33-S2H - Verdad Planned Well - Surcon MWD						Out of range
UPV 33-13K4 - Noble SI Well - No Surveys						Out of range
UPV 33-15K4 - Noble T/A Well - No Surveys						Out of range
UPV 33-7K4 - Noble SI Well - No Surveys						Out of range
2N-64W-34 Offsets Incomplete						
FRITZLER 12-34 - Noble PR Well - Actual VES Surveys						Out of range
Shufly State Y34-784 - Noble Planned Well - Planned Su	7,124.84	14,088.68	357.26	236.74	2.964	CC
Shufly State Y34-784 - Noble Planned Well - Planned Su	7,150.00	14,094.48	358.58	235.57	2.915	ES
Shufly State Y34-784 - Noble Planned Well - Planned Su	7,200.00	14,105.45	368.92	241.92	2.905	SF

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Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 24' @ 5041.00usft (RIG)

Offset Depths are relative to Offset Datum

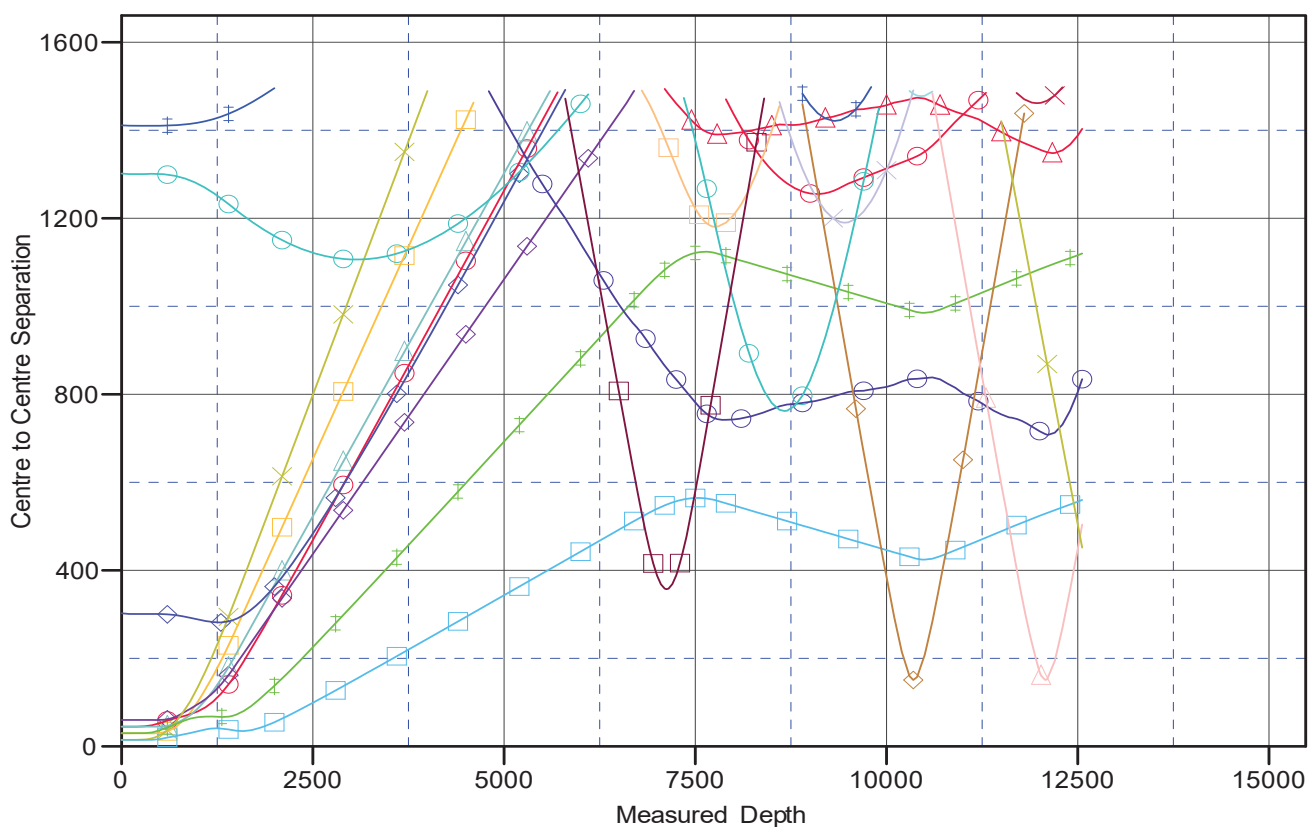
Central Meridian is -105.500000

Coordinates are relative to: GEORGENE 2828-04H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.61°

Ladder Plot



LEGEND

GEORGENE 2833-03H, Wellbore #1, Design #3 V0	STONEBREAKER 28W-304, PDCPR Well, Actual Ensign Surveys V0	BRNAK 3428, Noble SI Well, No Surveys V0
GEORGENE 2828-01H, Wellbore #1, Design #2 V0	GREER 2328, Noble SI Well, No Surveys V0	STONEBREAKER 42-28, PDC P&A Well, No Surveys V0
GEORGENE 2833-02H, Wellbore #1, Design #3 V0	BRNAK 4428, Noble SI Well, No Surveys V0	BRNAK 7728, Noble P&A Well, No Surveys V0
GEORGENE 2833-01H, Wellbore #1, Design #3 V0	GREER 1428, Noble T/A Well, No Surveys V0	JACKSON 38-7H, Verdard PR Well, Actual BHI Surveys V0
GEORGENE 2833-04H, Wellbore #1, Design #4 V0	STONEBREAKER 28V-234, PDCPR Well, Actual Ensign Surveys V0	Shufly State Y 34-784, Noble Planned Well, Planned Surveys (Gold to True) V0
GEORGENE 2828-02H, Wellbore #1, Design #2 V0	STONEBREAKER 32-28, PDC P&A Well, No Surveys V0	NGL CSA, NGL IJ Well, Actual Ensign Surveys V0
GEORGENE 2828-03H, Wellbore #1, Design #2 V0	GREER 1328, Noble SI Well, No Surveys V0	

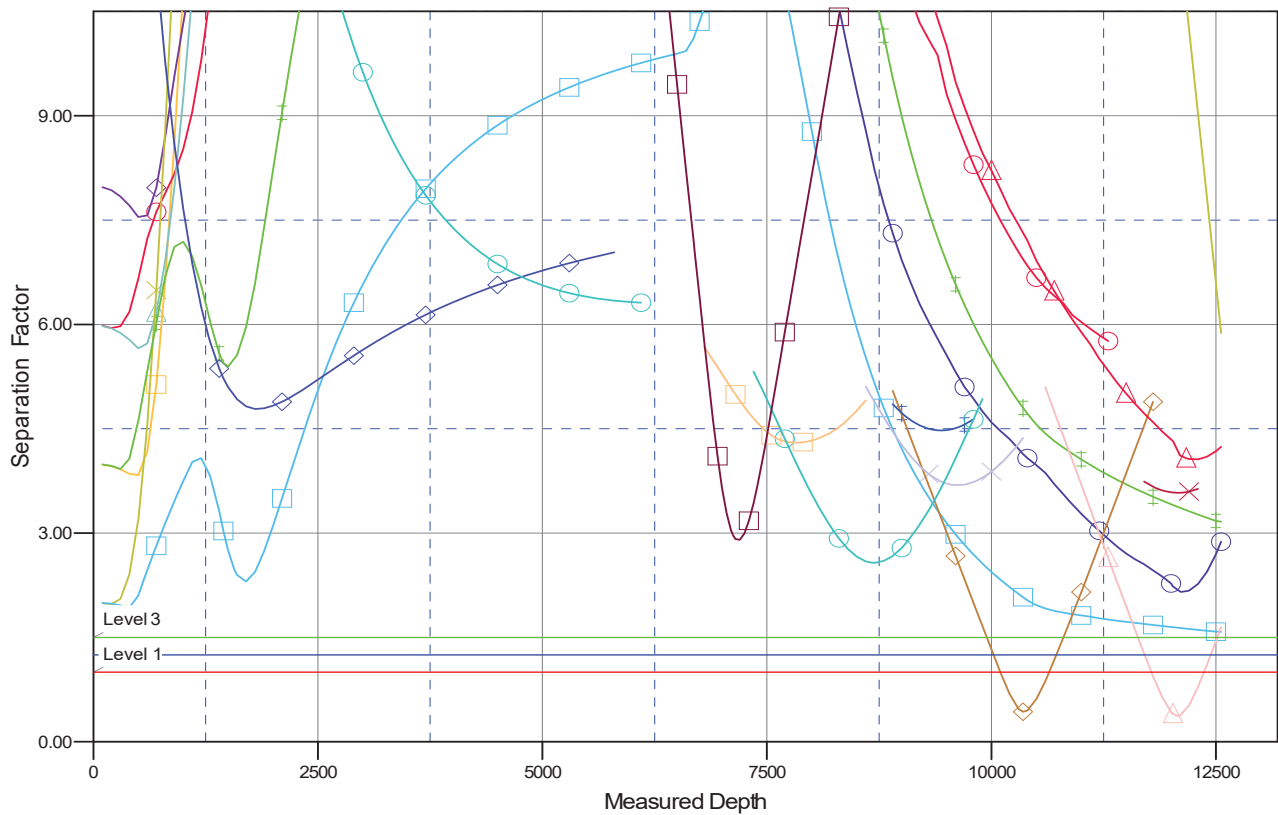
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Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: GEORGENE 2828-04H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.61°

Separation Factor Plot



LEGEND

GEORGENE 2833-03H, Wellbore #1, Design #3 V0	STONEBREAKER 28W-304, PDCPR Well, Actual Ensign Surveys V0	BRNAK 3428, Noble SI Well, No Surveys V0
GEORGENE 2828-01H, Wellbore #1, Design #2 V0	GREER 2328, Noble SI Well, No Surveys V0	STONEBREAKER 42-28, PDC P&AW Well, No Surveys V0
GEORGENE 2833-02H, Wellbore #1, Design #3 V0	BRNAK 4428, Noble SI Well, No Surveys V0	BRNAK 7728, Noble P&A Well, No Surveys V0
GEORGENE 2833-01H, Wellbore #1, Design #3 V0	GREER 1428, Noble T/A Well, No Surveys V0	JACKSON 35-7H, Verdad PR Well, Actual BHI Surveys V0
GEORGENE 2833-04H, Wellbore #1, Design #4 V0	STONEBREAKER 28V-224, PDCPR Well, Actual Ensign Surveys V0	Shutty State Y 34-784, Noble Planned Well, Planned Surveys (Grid to True) V0
GEORGENE 2828-02H, Wellbore #1, Design #2 V0	STONEBREAKER 32-28, PDC P&AW Well, No Surveys V0	NGL CSA, NGL LU Well, Actual Ensign Surveys V0
GEORGENE 2828-03H, Wellbore #1, Design #2 V0	GREER 1328, Noble SI Well, No Surveys V0	