

# **VERDAD RESOURCES**

**WATTENBERG FIELD  
2N-64W-28 GEORGENE PAD  
GEORGENE 2828-01H**

**Wellbore #1  
Design #2**

## **Anticollision Summary Report**

**09 July, 2020**

# HP

## Anticollision Summary Report

<b>Company:</b>	VERDAD RESOURCES	<b>Local Co-ordinate Reference:</b>	Well GEORGENE 2828-01H
<b>Project:</b>	WATTENBERG FIELD	<b>TVD Reference:</b>	RKB = 24' @ 5040.00usft (RIG)
<b>Reference Site:</b>	2N-64W-28 GEORGENE PAD	<b>MD Reference:</b>	RKB = 24' @ 5040.00usft (RIG)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	GEORGENE 2828-01H	<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>	Wellbore #1	<b>Database:</b>	EDM 5000.16 Single User Db
<b>Reference Design:</b>	Design #2	<b>Offset TVD Reference:</b>	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	7/9/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	1,700.00	Design #2 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination	
1,700.00	12,335.86	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-28 GEORGENE PAD						
GEORGENE 2828-02H - Wellbore #1 - Design #2	200.00	200.00	15.01	7.44	1.983	CC, ES
GEORGENE 2828-02H - Wellbore #1 - Design #2	12,335.86	12,287.01	559.82	210.43	1.602	SF
GEORGENE 2828-03H - Wellbore #1 - Design #2	200.00	200.00	30.00	22.44	3.965	CC, ES
GEORGENE 2828-03H - Wellbore #1 - Design #2	12,335.86	12,370.64	1,119.83	770.52	3.206	SF
GEORGENE 2828-04H - Wellbore #1 - Design #2	200.00	201.00	45.02	37.45	5.949	CC, ES, SF
GEORGENE 2833-01H - Wellbore #1 - Design #2	200.00	202.00	105.02	97.46	13.877	CC, ES
GEORGENE 2833-01H - Wellbore #1 - Design #2	7,422.00	7,067.65	154.52	122.14	4.772	SF
GEORGENE 2833-02H - Wellbore #1 - Design #2	200.00	202.00	90.00	82.44	11.893	CC, ES
GEORGENE 2833-02H - Wellbore #1 - Design #2	8,119.47	6,925.12	355.29	306.57	7.293	SF
GEORGENE 2833-03H - Wellbore #1 - Design #2	200.00	201.00	75.00	67.43	9.910	CC, ES
GEORGENE 2833-03H - Wellbore #1 - Design #2	8,894.74	6,979.58	411.58	339.19	5.686	SF
GEORGENE 2833-04H - Wellbore #1 - Design #2	116.33	117.33	60.00	52.47	7.968	CC
GEORGENE 2833-04H - Wellbore #1 - Design #2	200.00	200.99	60.00	52.43	7.929	ES
GEORGENE 2833-04H - Wellbore #1 - Design #2	9,565.46	7,163.01	344.18	247.22	3.550	SF
2N-64W-28 Offsets Incomplete						
BRNAK 34-28 - Noble PR Well - No Surveys	9,065.81	7,030.00	152.20	-157.93	0.491	Level 1, ES, SF
BRNAK 34-28 - Noble PR Well - No Surveys	9,075.80	7,030.00	151.86	-156.98	0.492	Level 1, CC
BRNAK 44-28 - Noble PR Well - No Surveys	7,806.76	7,050.00	151.42	-127.23	0.543	Level 1, CC, ES, SF
BRNAK 77-28 - Noble P&A Well - No Surveys	8,492.45	7,022.00	530.12	234.79	1.795	CC
BRNAK 77-28 - Noble P&A Well - No Surveys	8,500.00	7,022.00	530.19	234.45	1.793	ES, SF
GREER 13-28 - Noble SI Well - No Surveys	11,759.73	7,022.00	1,464.36	1,065.30	3.670	CC
GREER 13-28 - Noble SI Well - No Surveys	11,800.00	7,022.00	1,464.91	1,063.92	3.653	ES
GREER 13-28 - Noble SI Well - No Surveys	12,004.89	7,022.00	1,482.85	1,073.85	3.626	SF
GREER 14-28 - Noble T/A Well - No Surveys	11,865.14	7,046.00	153.55	-249.92	0.381	Level 1, CC, ES, SF
GREER 23-28 - Noble SI Well - No Surveys	9,989.14	7,007.00	1,488.20	1,149.73	4.397	CC
GREER 23-28 - Noble SI Well - No Surveys	10,100.00	7,007.00	1,492.32	1,148.53	4.341	ES, SF
GREER 24-28 - Noble T/A Well - No Surveys	10,570.71	7,040.00	151.52	-208.09	0.421	Level 1, CC, ES, SF
STONEBRAKER 32-28 - PDC P&A Well - No Surveys						Out of range
STONEBRAKER 42-28 - PDC P&A Well - No Surveys						Out of range
STONEBREAKER 28V-234 - PDC PR Well - Actual Ensig						Out of range
STONEBREAKER 28W-304 - PDC PR Well - Actual Ens						Out of range

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<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.16 Single User Db
<b>Reference Design:</b>	Design #2	<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						
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						Out of range
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 Incomplete						
JACKSON 33-6H - Verdad PR Well - Actual BHI Surveys	10,447.86	6,987.22	389.74	280.39	3.564	CC, ES, SF
JACKSON 33-7H - Verdad PR Well - Actual BHI Surveys	10,273.78	7,152.00	229.55	121.92	2.133	CC, ES, SF
UPV 33-15K4 - Noble T/A Well - No Surveys						Out of range
UPV 33-7K4 - Noble PR 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	6,835.29	12,221.43	427.13	347.33	5.353	CC
Shufly State Y34-784 - Noble Planned Well - Planned Su	6,850.00	12,225.43	427.52	347.30	5.329	ES, SF

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<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.16 Single User Db
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Reference Depths are relative to RKB = 24' @ 5040.00usft (RIG)

Offset Depths are relative to Offset Datum

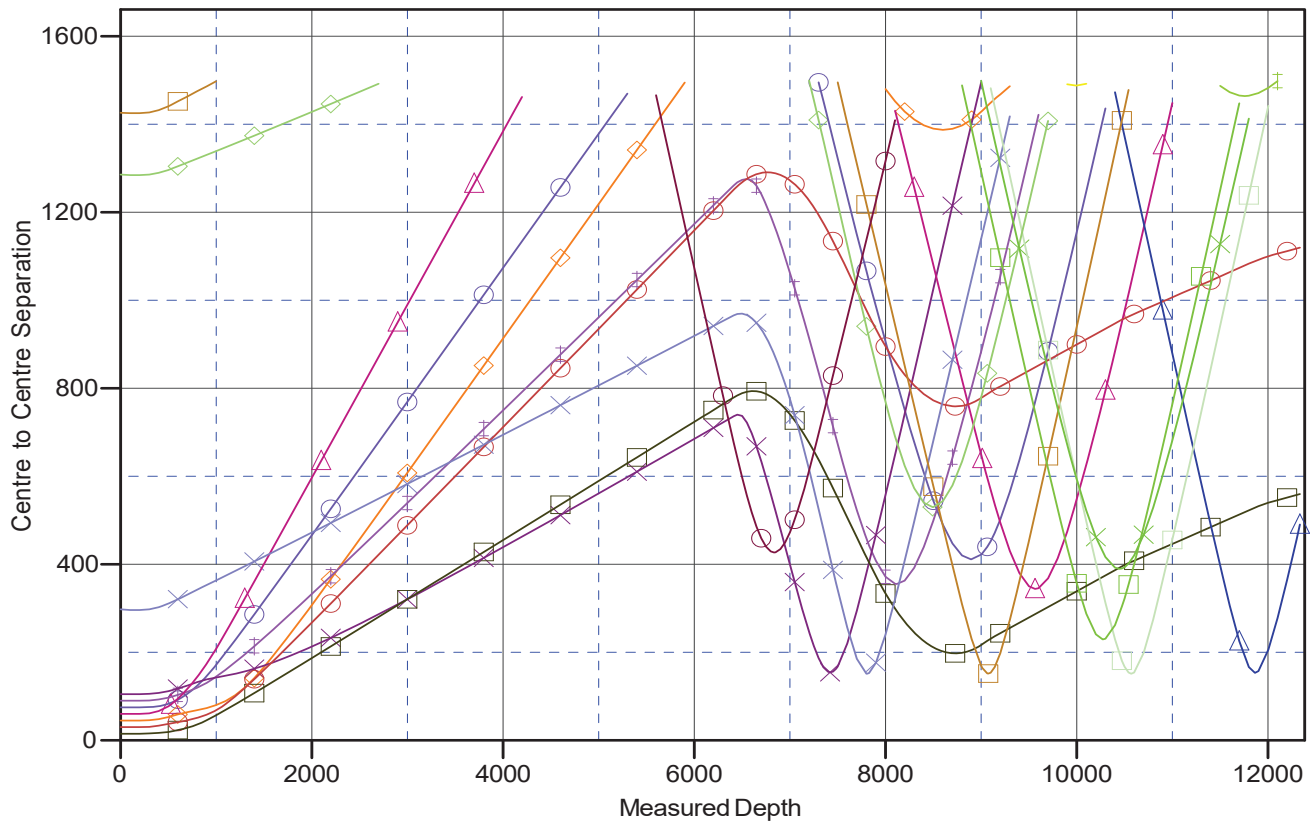
Central Meridian is -105.500000

Coordinates are relative to: GEORGENE 2828-01H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.61°

## Ladder Plot



## LEGEND

GEORGENE 283303H, Wellbore #1, Design #2 V0	GEORGENE 282803H, Wellbore #1, Design #2 V0	GREER 24-28, Noble T/A Well No Surveys V0
GEORGENE 282804H, Wellbore #1, Design #2 V0	GREER 23-28, Noble SI Well No Surveys V0	BRNAK 77-28, Noble P/A Well No Surveys V0
GEORGENE 283302H, Wellbore #1, Design #2 V0	BRNAK 44-28, Noble PR Well No Surveys V0	JACKSON 33-7H, Verdad PR Well Actual BHI Surveys V0
GEORGENE 283301H, Wellbore #1, Design #2 V0	GREER 14-28, Noble T/A Well No Surveys V0	JACKSON 33-6H, Verdad PR Well Actual BHI Surveys V0
GEORGENE 283304H, Wellbore #1, Design #2 V0	GREER 13-28, Noble SI Well No Surveys V0	Shufly State Y34-784, Noble Planned Well, Planned Surveys (Grid to True) V0
GEORGENE 282802H, Wellbore #1, Design #2 V0	BRNAK 34-28, Noble PR Well No Surveys V0	

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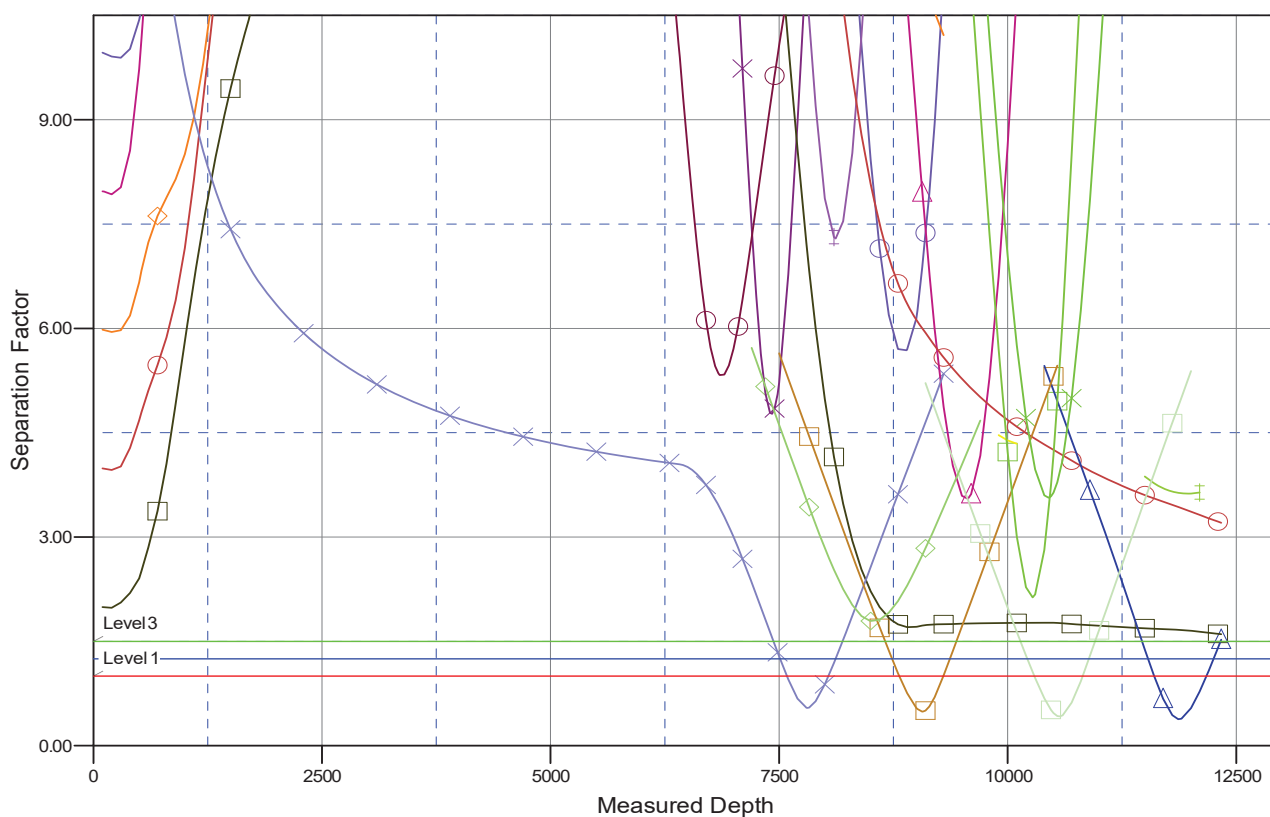
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Grid Convergence at Surface is: 0.61°

## Separation Factor Plot



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GEORGENE 2833-03H, Wellbore #1, Design #2 V0	GEORGENE 2828-03H, Wellbore #1, Design #2 V0	GREER 24-28, Noble T/A Well No Surveys V0
GEORGENE 2828-04H, Wellbore #1, Design #2 V0	GREER 23-28, Noble SI Well No Surveys V0	BRNAK 77-28, Noble P&A Well, No Surveys V0
GEORGENE 2833-02H, Wellbore #1, Design #2 V0	BRNAK 44-28, Noble PR Well, No Surveys V0	JACKSON 33-7H, Verdad PR Well Actual BHI Surveys V0
GEORGENE 2833-01H, Wellbore #1, Design #2 V0	GREER 14-28, Noble T/A Well No Surveys V0	JACKSON 33-6H, Verdad PR Well Actual BHI Surveys V0
GEORGENE 2833-04H, Wellbore #1, Design #2 V0	GREER 13-28, Noble SI Well No Surveys V0	Shufly State Y34-784, Noble Planned Well, Planned Surveys (Grid to True) V0
GEORGENE 2828-02H, Wellbore #1, Design #2 V0	BRNAK 34-28, Noble PR Well, No Surveys V0	