

Elm Ridge Exploration

SEC.9-T33N-R8W

IGE 128 PAD SEC.9-T33N-R8W

IGE 128

IGE 128

Design #1

Anticollision Report

07 January, 2009



OilField Guidance Inc.

Company: Elm Ridge Exploration
Project: SEC.9-T33N-R8W
Reference Site: IGE 128 PAD SEC.9-T33N-R8W
Site Error: 0.0ft
Reference Well: IGE 128
Well Error: 0.0ft
Reference Wellbore: IGE 128
Reference Design: Design #1

Local Co-ordinate Reference: Well IGE 128
TVD Reference: WELL @ 0.0ft (Original Well Elev)
MD Reference: WELL @ 0.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Compass
Offset TVD Reference: Offset Datum

Reference Design #1

Filter type: NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method: MD Interval 100.0ft
Depth Range: Unlimited
Results Limited by: Maximum center-center distance of 2,000.0ft
Warning Levels Evaluated at: 2.00 Sigma

Error Model: ISCWSA
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic

Survey Tool Program Date 1/7/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	3,931.5	Design #1 (IGE 128)	MWD	MWD - Standard

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
IGE 128 PAD SEC.9-T33N-R8W						
Ford Olsen #2 - Wellbore #1 - Wellbore #1	247.8	247.8	19.0	18.1	19.932	CC
Ford Olsen #2 - Wellbore #1 - Wellbore #1	600.0	599.8	20.0	17.4	7.797	ES
Ford Olsen #2 - Wellbore #1 - Wellbore #1	700.0	699.3	22.2	19.2	7.317	SF

Offset Design IGE 128 PAD SEC.9-T33N-R8W - Ford Olsen #2 - Wellbore #1 - Wellbore #1

Survey Program: 100-NS-GYRO-MS

Offset Site Error: 0.0ft

Offset Well Error: 0.0ft

Reference Measured Depth (ft)	Offset Measured Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	17.75	18.2	5.8	19.1	19.1	0.00	N/A	
100.0	100.0	0.1	0.1	17.65	18.2	5.8	19.1	18.9	0.25	77.913	
200.0	200.0	0.3	0.4	17.23	18.2	5.6	19.0	18.3	0.73	25.970	
204.8	204.8	0.3	0.4	17.19	18.2	5.6	19.0	18.3	0.75	25.208	
247.8	247.8	0.4	0.5	16.90	18.2	5.5	19.0	18.1	0.95	19.932	CC
300.0	300.0	0.6	0.6	16.52	18.3	5.4	19.0	17.9	1.20	15.936	
400.0	400.0	0.8	0.9	15.61	18.6	5.2	19.3	17.6	1.64	11.738	
500.0	500.0	1.0	1.1	13.92	19.2	4.8	19.8	17.6	2.10	9.394	
600.0	599.9	1.2	1.3	-86.75	20.0	4.2	20.0	17.4	2.56	7.797	ES
700.0	699.5	1.5	1.6	-101.38	20.8	3.7	22.2	19.2	3.03	7.317	SF
800.0	798.5	1.7	1.8	-108.78	21.8	3.1	26.6	23.0	3.53	7.529	
900.0	896.5	2.0	2.1	-127.68	22.7	2.5	37.1	33.1	4.00	9.284	
1,000.0	992.8	2.4	2.3	-142.50	23.7	1.9	57.2	52.8	4.44	12.873	
1,100.0	1,086.9	3.0	2.6	-151.53	24.6	1.2	86.5	81.7	4.87	17.762	
1,200.0	1,178.1	3.6	2.8	-156.94	25.4	0.7	124.1	118.8	5.29	23.477	
1,300.0	1,265.9	4.4	3.1	-160.29	26.1	0.0	169.3	163.6	5.69	29.771	
1,400.0	1,349.8	5.3	3.3	-162.43	26.7	-0.6	221.7	215.6	6.08	36.475	
1,500.0	1,429.2	6.4	3.5	-163.78	27.1	-1.2	280.8	274.3	6.46	43.439	
1,600.0	1,506.1	7.5	3.7	-166.55	27.6	-1.7	343.4	336.3	7.01	48.952	
1,700.0	1,583.1	8.6	3.9	-168.53	28.0	-2.2	406.3	398.7	7.59	53.511	
1,800.0	1,660.0	9.8	4.1	-169.99	28.3	-2.5	469.4	461.2	8.19	57.336	
1,900.0	1,737.0	11.0	4.3	-171.12	28.6	-2.9	532.7	523.9	8.79	60.578	
2,000.0	1,813.9	12.2	4.5	-172.03	28.9	-3.1	596.0	586.6	9.41	63.336	
2,100.0	1,890.9	13.4	4.7	-172.75	29.4	-3.4	659.3	649.3	10.03	65.711	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



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Reference Wellbore: IGE 128
Reference Design: Design #1

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North Reference: True
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Output errors are at 2.00 sigma
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Offset TVD Reference: Offset Datum

Offset Design IGE 128 PAD SEC.9-T33N-R8W - Ford Olsen #2 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
2,200.0	1,967.8	1,970.3	1,970.2	14.6	4.9	-173.34	29.8	-3.6	722.7	712.0	10.66	67.780		
2,300.0	2,044.7	2,046.8	2,046.8	15.8	5.1	-173.83	30.3	-3.9	786.1	774.8	11.29	69.599		
2,400.0	2,121.7	2,123.1	2,123.0	16.9	5.3	-174.26	30.6	-4.1	849.6	837.7	11.93	71.213		
2,500.0	2,198.6	2,199.3	2,199.2	18.1	5.5	-174.63	30.8	-4.4	913.2	900.6	12.57	72.652		
2,600.0	2,275.6	2,277.3	2,277.2	19.4	5.7	-174.96	31.0	-4.5	976.8	963.6	13.21	73.954		
2,700.0	2,352.5	2,354.1	2,354.0	20.6	5.9	-175.26	31.2	-4.6	1,040.4	1,026.6	13.85	75.134		
2,800.0	2,429.5	2,431.2	2,431.2	21.8	6.1	-175.52	31.4	-4.7	1,104.1	1,089.6	14.49	76.202		
2,900.0	2,506.4	2,509.8	2,509.7	23.0	6.3	-175.76	31.6	-4.8	1,167.7	1,152.5	15.13	77.165		
3,000.0	2,583.3	2,588.0	2,587.9	24.2	6.5	-175.97	31.9	-4.7	1,231.2	1,215.4	15.76	78.121		
3,100.0	2,660.3	2,665.3	2,665.2	25.4	6.6	-176.17	32.2	-4.6	1,294.7	1,278.3	16.34	79.231		
3,200.0	2,737.2	2,740.7	2,740.6	26.6	6.7	-176.36	32.3	-4.2	1,358.2	1,341.3	16.89	80.403		
3,300.0	2,814.2	2,814.9	2,814.9	27.8	6.7	-176.53	32.3	-4.1	1,421.9	1,404.5	17.43	81.598		
3,400.0	2,891.1	2,890.4	2,890.3	29.0	6.7	-176.68	32.2	-3.9	1,485.7	1,467.8	17.95	82.784		
3,500.0	2,968.0	2,900.0	2,899.9	30.2	6.7	-176.70	32.2	-3.9	1,551.0	1,532.6	18.45	84.062		
3,600.0	3,045.0	2,900.0	2,899.9	31.4	6.7	-176.70	32.2	-3.9	1,619.9	1,600.9	18.95	85.467		
3,700.0	3,121.9	2,900.0	2,899.9	32.6	6.7	-176.70	32.2	-3.9	1,691.8	1,672.4	19.46	86.958		
3,800.0	3,198.9	2,900.0	2,899.9	33.8	6.7	-176.70	32.2	-3.9	1,766.5	1,746.5	19.96	88.509		
3,900.0	3,275.8	2,900.0	2,899.9	35.0	6.7	-176.70	32.2	-3.9	1,843.6	1,823.1	20.46	90.100		
3,931.5	3,300.0	2,900.0	2,899.9	35.4	6.7	-176.70	32.2	-3.9	1,868.3	1,847.6	20.62	90.606		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



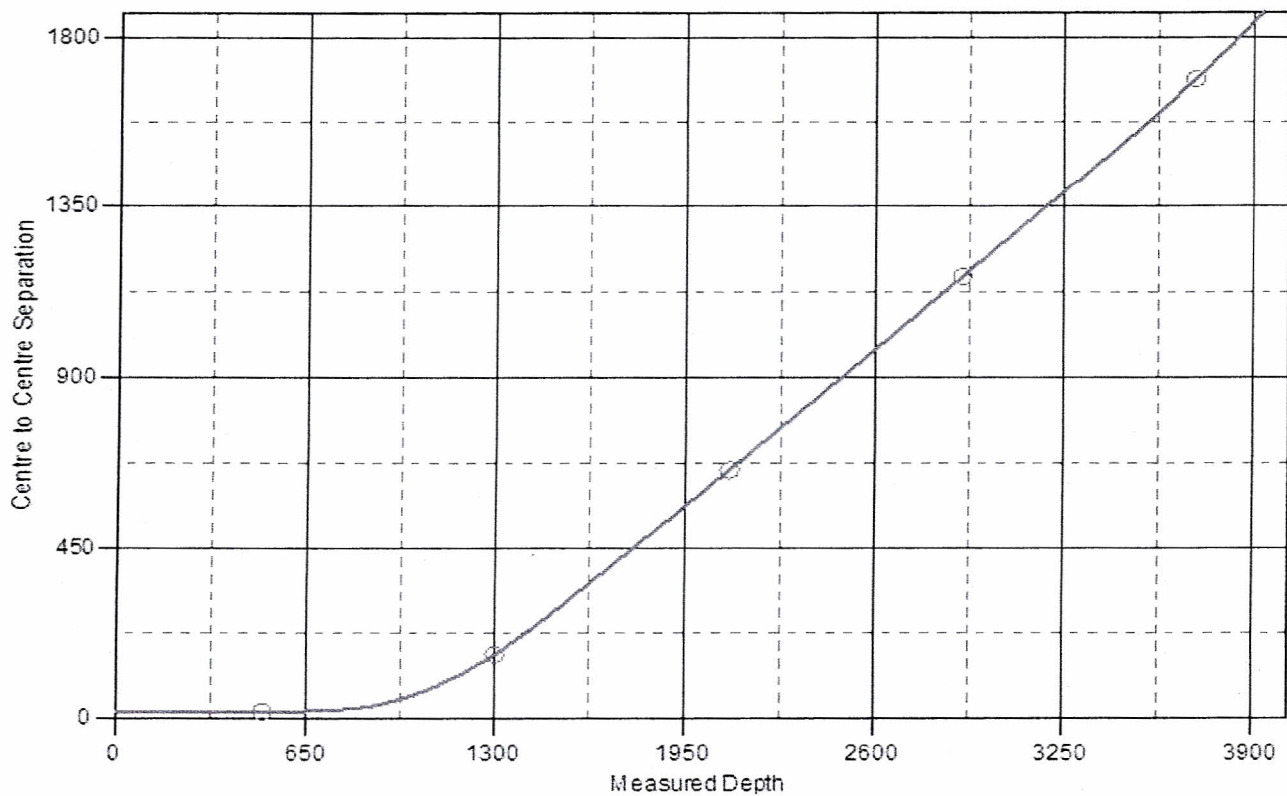
Company: Elm Ridge Exploration
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Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 0.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: IGE 128
 Coordinate System is US State Plane 1983, Colorado Southern Zone
 Grid Convergence at Surface is: -1.37°

Ladder Plot



LEGEND

Ford Olsen #2, Wellbore #1, Wellbore #1 V0

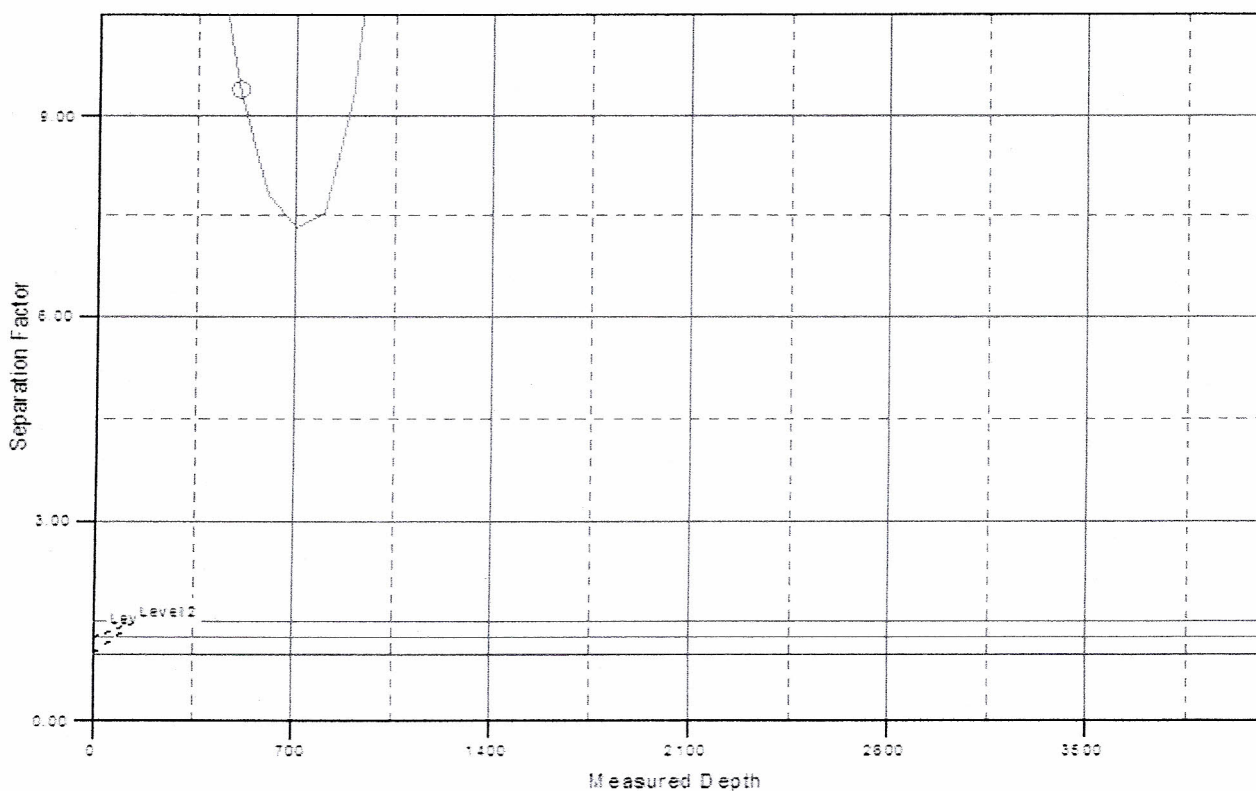
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Separation Factor Plot



LEGEND

 Ford Olsen #2 Wellbore #1 Wellbore #1 VO