

PetroShare Corp.

**Moffat County
SEC. 25, T6N, R90W
VOLOSHIN #3-25**

**VOLOSHIN #3-25
120113 V2**

Anticollision Risk Report

01 December, 2013



GeoGuidance Drilling Services

Anticollision Risk Report



Company:	PetroShare Corp.	Local Co-ordinate Reference:	Well VOLOSHIN #3-25
Project:	Moffat County	TVD Reference:	V #3-25 @ 7485.00usft
Reference Site:	SEC. 25, T6N, R90W	MD Reference:	V #3-25 @ 7485.00usft
Site Error:	0.00	North Reference:	Grid
Reference Well:	VOLOSHIN #3-25	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	VOLOSHIN #3-25	Database:	PetroShare
Reference Design:	120113 V2	Offset TVD Reference:	Offset Datum

Reference	120113 V2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 200.00usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Risk Settings	
Vertical Depth for Analysis:	usft (Below TVD Reference Datum)
Level of Acceptable Risk (1 in):	
Minimum Separation:	0 usft

Survey Tool Program	Date	12/1/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	8,314.55	120113 V2 (VOLOSHIN #3-25)	MWD	MWD - Standard

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						
SEC. 25, T6N, R90W						
KOWACH 3-25 - KOWACH 3-25 - KOWACH 3-25	124.54	123.54	49.85	49.56	169.590 CC	
KOWACH 3-25 - KOWACH 3-25 - KOWACH 3-25	3,013.10	3,009.33	52.39	39.53	4.074 ES, SF	

Offset Design												Offset Site Error:	0.00 usft
SEC. 25, T6N, R90W - KOWACH 3-25 - KOWACH 3-25 - KOWACH 3-25												Offset Well Error:	0.00 usft
Survey Program: 100-MWD													
Reference	Offset	Semi Major Axis		Distance				Minimum Separation	Separation Factor	Riskd Separation Factor	Probability of Collision	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	18.43	49.95			0			
100.00	100.00	99.07	99.07	0.09	0.09	17.96	49.87	49.68	0.19	262.837	0		
124.54	124.54	123.54	123.54	0.15	0.14	17.74	49.85	49.56	0.29	169.590	0	CC	
200.00	200.00	198.80	198.79	0.32	0.30	17.15	50.02	49.40	0.62	80.597	0		
300.00	300.00	298.68	298.67	0.54	0.51	16.25	50.56	49.51	1.05	47.960	0		
400.00	400.00	398.54	398.52	0.77	0.72	16.35	51.37	49.88	1.49	34.485	0		
500.00	500.00	498.23	498.22	0.99	0.94	16.68	52.48	50.55	1.93	27.164	0		
600.00	600.00	598.20	598.16	1.22	1.15	17.51	54.13	51.76	2.37	22.818	0		
700.00	700.00	697.85	697.78	1.44	1.37	18.99	56.03	53.21	2.81	19.904	0		
800.00	800.00	798.15	798.04	1.67	1.59	20.87	58.00	54.74	3.25	17.829	0		
900.00	900.00	898.37	898.24	1.89	1.79	22.64	59.45	55.77	3.68	16.158	0		
1,000.00	1,000.00	997.99	997.84	2.12	1.99	24.04	60.90	56.79	4.11	14.815	0		
1,100.00	1,100.00	1,097.41	1,097.22	2.34	2.21	25.51	63.29	58.74	4.55	13.910	0		
1,200.00	1,200.00	1,196.90	1,196.64	2.57	2.43	27.10	66.49	61.50	5.00	13.307	0		
1,300.00	1,300.00	1,296.77	1,296.41	2.79	2.65	28.89	70.29	64.85	5.44	12.910	0		
1,400.00	1,400.00	1,397.68	1,397.27	3.02	2.87	30.23	73.32	67.43	5.88	12.459	0		
1,500.00	1,500.00	1,498.01	1,497.57	3.24	3.08	30.90	75.22	68.90	6.32	11.903	0		
1,600.00	1,600.00	1,597.95	1,597.49	3.47	3.29	31.57	77.31	70.55	6.76	11.444	0		
1,700.00	1,700.00	1,698.40	1,697.92	3.69	3.50	31.99	78.93	71.74	7.19	10.976	0		
1,800.00	1,800.00	1,799.08	1,798.59	3.92	3.71	32.06	80.04	72.42	7.62	10.503	0		
1,900.00	1,900.00	1,899.96	1,899.47	4.14	3.91	32.41	79.81	71.76	8.05	9.915	0		

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

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Site Error:	0.00	North Reference:	Grid
Reference Well:	VOLOSHIN #3-25	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	VOLOSHIN #3-25	Database:	PetroShare
Reference Design:	120113 V2	Offset TVD Reference:	Offset Datum

Offset Design		SEC. 25, T6N, R90W - KOWACH 3-25 - KOWACH 3-25 - KOWACH 3-25											Offset Site Error:		0.00 usft	
Survey Program: 100-MWD													Offset Well Error:		0.00 usft	
Reference		Offset		Semi Major Axis		Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
2,000.00	2,000.00	1,999.50	1,999.01	4.36	4.12	33.05	79.45	70.97	8.48	9.367	0	ES, SF				
2,007.49	2,007.49	2,006.98	2,006.49	4.38	4.13	33.11	79.45	70.94	8.52	9.331	0					
2,100.00	2,100.00	2,099.29	2,098.79	4.59	4.33	33.63	79.54	70.63	8.92	8.921	0					
2,200.00	2,200.00	2,199.33	2,198.83	4.81	4.54	33.48	79.82	70.47	9.35	8.538	0					
2,300.00	2,300.00	2,298.86	2,298.35	5.04	4.74	32.57	80.28	70.50	9.78	8.207	0					
2,400.00	2,400.00	2,398.49	2,397.98	5.26	4.95	32.00	81.35	71.14	10.22	7.962	0					
2,500.00	2,500.00	2,499.38	2,498.86	5.49	5.17	31.55	82.33	71.68	10.65	7.728	0					
2,600.00	2,599.97	2,599.45	2,598.93	5.70	5.37	-48.35	81.13	70.09	11.05	7.344	0					
2,700.00	2,699.75	2,700.19	2,699.66	5.91	5.58	-51.53	76.35	64.89	11.46	6.665	0					
2,800.00	2,799.14	2,800.26	2,799.71	6.13	5.78	-58.06	68.19	56.31	11.87	5.743	0					
2,900.00	2,897.97	2,899.35	2,898.76	6.36	5.98	-70.21	58.71	46.39	12.32	4.765	0					
3,000.00	2,996.04	2,996.71	2,996.07	6.62	6.18	-91.00	52.50	39.70	12.80	4.102	0					
3,013.10	3,008.82	3,009.33	3,008.69	6.66	6.21	-94.26	52.39	39.53	12.86	4.074	0					
3,100.00	3,093.17	3,092.85	3,092.19	6.91	6.38	-116.47	57.34	44.17	13.18	4.352	0					
3,200.00	3,189.17	3,187.98	3,187.29	7.26	6.58	-136.61	75.59	62.19	13.40	5.640	0					
3,300.00	3,283.85	3,282.15	3,281.45	7.66	6.77	-149.01	103.09	89.49	13.60	7.582	0					
3,400.00	3,377.05	3,375.11	3,374.40	8.13	6.96	-156.79	137.13	123.35	13.78	9.948	0					
3,500.00	3,468.63	3,466.94	3,466.22	8.69	7.15	-162.04	176.04	162.02	14.02	12.557	0					

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Reference Depths are relative to V #3-25 @ 7485.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: VOLOSHIN #3-25
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: -1.25°

