

WPX Energy

Eddy County, New Mexico (NAD 83)

Collie 35-34-22-27 Fee Pad

Collie 35-34-22-27 Fee 401H

API: ???

ST01

Plan #2 ST01

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 04 2019

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30-015-45643

Anticollision Report

28 January, 2019



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Scientific Drilling, Intl

Anticollision Report

Company:	WPX Energy	Local Co-ordinate Reference:	Well Collie 35-34-22-27 Fee 401H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	GL 3079 + KB 26 = @ 3105.00usft (HP 265)
Reference Site:	Collie 35-34-22-27 Fee Pad	MD Reference:	GL 3079 + KB 26 = @ 3105.00usft (HP 265)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Collie 35-34-22-27 Fee 401H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	Midland District
Reference Design:	Plan #2 ST01	Offset TVD Reference:	Offset Datum

Reference	Plan #2 ST01		
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 center-center distance of 9,999.98 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	1/28/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	8,600.00	Plan #1 PH (Wellbore #1)	MWD+HRGM+MS	OWSG MWD + HRGM + Multi-Station Correction	
8,600.00	19,481.37	Plan #2 ST01 (ST01)	MWD+HRGM+MS	OWSG MWD + HRGM + Multi-Station Correction	

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							
Beagle 35-34-22-27 Fee Pad							
Beagle 35-34-22-27 Fee 401H - ST01 - Plan #2 ST01	2,500.00	2,500.00	25.01	7.53	1.431	Level 3, CC, ES, SF	
Beagle 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 P	2,500.00	2,500.00	25.01	7.53	1.431	Level 3, CC, ES, SF	
Collie 35-34-22-27 Fee Pad							
Collie 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH	8,877.52	8,877.52	0.00	0.00	0.000	Level 1, CC, SF	
Collie 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH	8,880.00	8,880.00	0.01	-0.89	0.006	Level 1, ES	
Helper Fee #1 - Wellbore #1 - As Drilled	18,044.74	9,329.71	206.79	43.43	1.266	Level 3, CC, ES, SF	
Otis 34 #001 - Wellbore #1 - As Drilled	17,810.26	9,122.20	407.75	59.36	1.170	Level 2, CC, ES, SF	
Pre-Ongard Well #001 - Wellbore #1 - As Drilled	11,016.34	9,216.00	518.84	257.55	1.986	CC, ES, SF	

Offset Design	Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - ST01 - Plan #2 ST01												Offset Site Error:	0.00 usft
Survey Program:	0-MWD+HRGM, 8600-MWD+HRGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor	Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-88.85	0.50	-25.00	25.01					
100.00	100.00	100.00	100.00	0.13	0.13	-88.85	0.50	-25.00	25.01	24.74	0.27	94.263		
200.00	200.00	200.00	200.00	0.49	0.49	-88.85	0.50	-25.00	25.01	24.02	0.98	25.458		
300.00	300.00	300.00	300.00	0.85	0.85	-88.85	0.50	-25.00	25.01	23.31	1.70	14.716		
400.00	400.00	400.00	400.00	1.21	1.21	-88.85	0.50	-25.00	25.01	22.59	2.42	10.349		
500.00	500.00	500.00	500.00	1.57	1.57	-88.85	0.50	-25.00	25.01	21.87	3.13	7.981		
600.00	600.00	600.00	600.00	1.92	1.92	-88.85	0.50	-25.00	25.01	21.16	3.85	6.495		
700.00	700.00	700.00	700.00	2.28	2.28	-88.85	0.50	-25.00	25.01	20.44	4.57	5.475		
800.00	800.00	800.00	800.00	2.64	2.64	-88.85	0.50	-25.00	25.01	19.72	5.28	4.732		
900.00	900.00	900.00	900.00	3.00	3.00	-88.85	0.50	-25.00	25.01	19.00	6.00	4.167		
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	-88.85	0.50	-25.00	25.01	18.29	6.72	3.722		
1,100.00	1,100.00	1,100.00	1,100.00	3.72	3.72	-88.85	0.50	-25.00	25.01	17.57	7.43	3.363		
1,200.00	1,200.00	1,200.00	1,200.00	4.08	4.08	-88.85	0.50	-25.00	25.01	16.85	8.15	3.067		
1,300.00	1,300.00	1,300.00	1,300.00	4.43	4.43	-88.85	0.50	-25.00	25.01	16.14	8.87	2.820		
1,400.00	1,400.00	1,400.00	1,400.00	4.79	4.79	-88.85	0.50	-25.00	25.01	15.42	9.59	2.609		
1,500.00	1,500.00	1,500.00	1,500.00	5.15	5.15	-88.85	0.50	-25.00	25.01	14.70	10.30	2.427		
1,600.00	1,600.00	1,600.00	1,600.00	5.51	5.51	-88.85	0.50	-25.00	25.01	13.99	11.02	2.269		
1,700.00	1,700.00	1,700.00	1,700.00	5.87	5.87	-88.85	0.50	-25.00	25.01	13.27	11.74	2.131		

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

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Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - ST01 - Plan #2 ST01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HRGM, 8600-MWD+HRGM													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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
1,800.00	1,800.00	1,800.00	1,800.00	6.23	6.23	-88.85	0.50	-25.00	25.01	12.55	12.45	2.008	
1,900.00	1,900.00	1,900.00	1,900.00	6.59	6.59	-88.85	0.50	-25.00	25.01	11.83	13.17	1.899	
2,000.00	2,000.00	2,000.00	2,000.00	6.94	6.94	-88.85	0.50	-25.00	25.01	11.12	13.89	1.801	
2,100.00	2,100.00	2,100.00	2,100.00	7.30	7.30	-88.85	0.50	-25.00	25.01	10.40	14.60	1.712	
2,200.00	2,200.00	2,200.00	2,200.00	7.66	7.66	-88.85	0.50	-25.00	25.01	9.68	15.32	1.632	
2,300.00	2,300.00	2,300.00	2,300.00	8.02	8.02	-88.85	0.50	-25.00	25.01	8.97	16.04	1.559	
2,400.00	2,400.00	2,400.00	2,400.00	8.38	8.38	-88.85	0.50	-25.00	25.01	8.25	16.75	1.492 Level 3	
2,500.00	2,500.00	2,500.00	2,500.00	8.74	8.74	-88.85	0.50	-25.00	25.01	7.53	17.47	1.431 Level 3, CC, ES, SF	
2,600.00	2,600.00	2,599.19	2,599.17	9.09	9.08	-90.56	-0.26	-26.54	26.55	8.39	18.16	1.462 Level 3	
2,700.00	2,700.00	2,698.15	2,697.99	9.45	9.41	-94.65	-2.53	-31.14	31.31	12.48	18.82	1.663	
2,800.00	2,799.98	2,796.59	2,796.06	9.81	9.74	-81.73	-6.30	-38.75	39.17	19.72	19.46	2.013	
2,900.00	2,899.84	2,895.68	2,894.59	10.17	10.08	-90.68	-10.97	-48.22	49.37	29.24	20.13	2.452	
3,000.00	2,999.45	2,994.63	2,992.97	10.53	10.42	-99.64	-15.65	-57.69	60.90	40.08	20.82	2.925	
3,100.00	3,098.70	3,093.16	3,090.94	10.88	10.76	-108.12	-20.31	-67.12	74.50	52.99	21.52	3.462	
3,200.00	3,197.47	3,191.17	3,188.39	11.24	11.11	-115.79	-24.95	-76.49	90.75	68.53	22.22	4.084	
3,300.00	3,295.62	3,288.54	3,285.20	11.60	11.45	-122.49	-29.55	-85.81	110.01	87.08	22.93	4.798	
3,400.00	3,393.06	3,385.14	3,381.26	11.97	11.79	-128.24	-34.12	-95.05	132.50	108.87	23.63	5.607	
3,500.00	3,489.64	3,480.87	3,476.43	12.34	12.14	-133.10	-38.64	-104.21	158.33	134.00	24.34	6.506	
3,600.00	3,585.27	3,575.60	3,570.62	12.72	12.47	-137.20	-43.12	-113.28	187.54	162.50	25.04	7.489	
3,692.53	3,672.79	3,662.28	3,656.79	13.09	12.79	-140.41	-47.22	-121.57	217.55	191.87	25.69	8.470	
3,700.00	3,679.82	3,669.22	3,663.70	13.12	12.81	-140.68	-47.55	-122.24	220.09	194.35	25.74	8.551	
3,800.00	3,773.88	3,762.33	3,756.28	13.52	13.15	-143.79	-51.95	-131.15	254.48	228.04	26.43	9.827	
3,900.00	3,867.94	3,855.44	3,848.88	13.94	13.49	-146.17	-56.35	-140.06	289.37	262.24	27.13	10.667	
4,000.00	3,961.99	3,948.55	3,941.44	14.36	13.83	-148.03	-60.76	-148.97	324.61	296.79	27.83	11.665	
4,100.00	4,056.05	4,041.66	4,034.02	14.80	14.17	-149.54	-65.16	-157.88	360.10	331.57	28.53	12.622	
4,200.00	4,150.11	4,134.78	4,126.60	15.24	14.51	-150.77	-69.56	-166.78	395.77	366.53	29.23	13.538	
4,300.00	4,244.17	4,227.89	4,219.19	15.69	14.85	-151.80	-73.97	-175.69	431.57	401.82	29.94	14.414	
4,400.00	4,338.23	4,321.00	4,311.77	16.14	15.19	-152.68	-78.37	-184.60	467.47	436.82	30.65	15.251	
4,500.00	4,432.28	4,414.11	4,404.35	16.60	15.54	-153.42	-82.77	-193.51	503.45	472.09	31.36	16.052	
4,600.00	4,526.34	4,507.23	4,496.93	17.07	15.88	-154.07	-87.17	-202.42	539.50	507.42	32.08	16.817	
4,700.00	4,620.40	4,600.34	4,589.51	17.54	16.23	-154.64	-91.58	-211.33	575.61	542.81	32.80	17.549	
4,800.00	4,714.46	4,693.45	4,682.09	18.01	16.58	-155.14	-95.98	-220.24	611.75	578.23	33.52	18.250	
4,900.00	4,808.52	4,786.56	4,774.67	18.49	16.92	-155.59	-100.38	-229.15	647.94	613.69	34.24	18.921	
5,000.00	4,902.57	4,879.67	4,867.25	18.98	17.27	-155.99	-104.78	-238.06	684.15	649.18	34.97	19.564	
5,100.00	4,996.63	4,972.79	4,959.83	19.46	17.62	-156.35	-109.19	-246.97	720.39	684.69	35.70	20.180	
5,200.00	5,090.69	5,065.90	5,052.41	19.96	17.97	-156.67	-113.59	-255.88	756.65	720.22	36.43	20.771	
5,300.00	5,184.75	5,159.01	5,144.99	20.45	18.32	-156.97	-117.99	-264.79	792.93	755.77	37.16	21.338	
5,400.00	5,278.81	5,252.12	5,237.57	20.95	18.67	-157.23	-122.39	-273.70	829.23	791.34	37.89	21.883	
5,500.00	5,372.87	5,345.24	5,330.15	21.44	19.02	-157.48	-126.80	-282.61	865.54	826.81	38.63	22.407	
5,600.00	5,466.92	5,438.35	5,422.73	21.95	19.37	-157.71	-131.20	-291.52	901.87	862.50	39.37	22.910	
5,700.00	5,560.98	5,531.46	5,515.31	22.45	19.72	-157.92	-135.60	-300.43	938.21	898.10	40.10	23.394	
5,800.00	5,655.04	5,624.57	5,607.89	22.96	20.07	-158.11	-140.01	-309.34	974.55	933.71	40.84	23.860	
5,900.00	5,749.10	5,717.68	5,700.47	23.46	20.42	-158.29	-144.41	-318.25	1,010.91	969.32	41.59	24.309	
6,000.00	5,843.16	5,810.80	5,793.05	23.97	20.78	-158.46	-148.81	-327.16	1,047.27	1,004.94	42.33	24.741	
6,100.00	5,937.21	5,903.91	5,885.63	24.49	21.13	-158.61	-153.21	-336.07	1,083.64	1,040.57	43.07	25.159	
6,200.00	6,031.27	5,997.02	5,978.21	25.00	21.48	-158.76	-157.62	-344.98	1,120.02	1,076.20	43.82	25.561	
6,300.00	6,125.33	6,090.13	6,070.79	25.52	21.84	-158.89	-162.02	-353.89	1,156.40	1,111.84	44.56	25.949	
6,400.00	6,219.39	6,183.25	6,163.37	26.03	22.19	-159.02	-166.42	-362.80	1,192.79	1,147.48	45.31	26.324	
6,500.00	6,313.45	6,276.38	6,255.95	26.55	22.54	-159.14	-170.82	-371.71	1,229.18	1,183.12	46.06	26.687	
6,600.00	6,407.51	6,369.47	6,348.53	27.07	22.90	-159.26	-175.23	-380.62	1,265.58	1,218.77	46.81	27.037	
6,620.95	6,427.21	6,388.98	6,367.93	27.18	22.97	-159.28	-176.15	-382.48	1,273.21	1,226.24	46.97	27.109	
6,700.00	6,501.92	6,462.95	6,441.48	27.58	23.25	-159.56	-179.65	-389.58	1,301.03	1,253.47	47.56	27.356	

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Anticollision Report

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 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
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 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - ST01 - Plan #2 ST01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HRGM, 8600-MWD+HRGM													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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,800.00	6,597.41	6,557.54	6,535.53	28.08	23.61	-159.82	-184.12	-398.61	1,333.47	1,285.16	48.31	27.601	
6,900.00	6,693.88	6,653.13	6,630.58	28.55	23.98	-160.01	-188.64	-407.78	1,362.79	1,313.73	49.06	27.775	
7,000.00	6,791.20	6,749.63	6,726.52	29.00	24.35	-160.12	-193.20	-416.99	1,388.97	1,339.15	49.82	27.881	
7,100.00	6,889.27	6,846.90	6,823.24	29.43	24.72	-160.16	-197.80	-426.30	1,411.96	1,361.40	50.57	27.922	
7,200.00	6,987.96	6,944.83	6,920.61	29.84	25.09	-160.13	-202.43	-435.67	1,431.76	1,380.45	51.31	27.902	
7,300.00	7,087.15	7,043.30	7,018.52	30.22	25.47	-160.04	-207.09	-445.09	1,448.35	1,396.29	52.06	27.823	
7,400.00	7,186.72	7,142.20	7,116.85	30.58	25.85	-159.88	-211.76	-454.56	1,461.71	1,408.92	52.79	27.688	
7,500.00	7,286.55	7,241.39	7,215.47	30.91	26.22	-159.65	-216.45	-464.05	1,471.86	1,418.34	53.52	27.501	
7,600.00	7,386.52	7,347.00	7,320.49	31.23	26.63	-159.34	-221.39	-474.05	1,478.75	1,424.46	54.29	27.239	
7,613.48	7,400.00	7,364.57	7,337.98	31.27	26.69	-179.11	-222.13	-475.54	1,479.38	1,424.94	54.42	27.186	
7,700.00	7,486.52	7,477.80	7,450.91	31.52	27.11	-178.83	-225.73	-482.82	1,482.22	1,426.99	55.22	26.840	
7,800.00	7,586.52	7,609.22	7,582.27	31.82	27.58	-178.70	-227.43	-486.25	1,483.56	1,427.45	56.12	26.437	
7,900.00	7,686.52	7,713.48	7,686.52	32.12	27.93	-178.70	-227.45	-486.30	1,483.58	1,426.77	56.81	26.115	
8,000.00	7,786.52	7,813.48	7,786.52	32.43	28.26	-178.70	-227.45	-486.30	1,483.58	1,426.11	57.48	25.812	
8,100.00	7,886.52	7,913.48	7,886.52	32.73	28.60	-178.70	-227.45	-486.30	1,483.58	1,425.44	58.14	25.516	
8,200.00	7,986.52	8,013.48	7,986.52	33.03	28.93	-178.70	-227.45	-486.30	1,483.58	1,424.77	58.81	25.225	
8,300.00	8,086.52	8,113.48	8,086.52	33.34	29.27	-178.70	-227.45	-486.30	1,483.58	1,424.10	59.48	24.941	
8,400.00	8,186.52	8,213.48	8,186.52	33.64	29.61	-178.70	-227.45	-486.30	1,483.58	1,423.43	60.16	24.663	
8,500.00	8,286.52	8,313.48	8,286.52	33.95	29.94	-178.70	-227.45	-486.30	1,483.58	1,422.75	60.83	24.390	
8,600.00	8,386.52	8,413.48	8,386.52	34.11	30.28	-178.70	-227.45	-486.30	1,483.58	1,422.25	61.34	24.188	
8,700.00	8,486.52	8,513.48	8,486.52	34.11	30.60	-178.70	-227.45	-486.30	1,483.58	1,421.92	61.66	24.062	
8,704.34	8,490.86	8,517.81	8,490.86	34.11	30.61	-178.70	-227.45	-486.30	1,483.58	1,421.92	61.66	24.059	
8,800.00	8,586.52	8,613.48	8,586.52	34.12	30.75	-178.70	-227.45	-486.30	1,483.58	1,421.77	61.81	24.001	
8,877.52	8,664.04	8,690.99	8,664.04	34.13	30.75	-178.70	-227.45	-486.30	1,483.58	1,421.76	61.83	23.996	
8,900.00	8,686.52	8,711.81	8,686.52	34.13	30.75	-88.70	-227.45	-486.68	1,483.58	1,421.76	61.83	23.995	
8,950.00	8,736.33	8,758.11	8,731.00	34.15	30.76	-88.71	-227.48	-490.23	1,483.61	1,421.76	61.85	23.989	
9,000.00	8,785.59	8,804.44	8,776.74	34.17	30.78	-88.73	-227.54	-497.49	1,483.66	1,421.78	61.88	23.976	
9,050.00	8,833.93	8,850.00	8,821.01	34.21	30.81	-88.75	-227.63	-508.22	1,483.74	1,421.80	61.94	23.956	
9,100.00	8,880.97	8,897.28	8,865.90	34.26	30.86	-88.79	-227.76	-523.03	1,483.84	1,421.82	62.02	23.925	
9,150.00	8,926.37	8,943.84	8,908.76	34.33	30.91	-88.83	-227.91	-541.19	1,483.97	1,421.85	62.12	23.887	
9,200.00	8,969.76	8,990.52	8,950.11	34.40	30.98	-88.88	-228.09	-562.82	1,484.13	1,421.87	62.26	23.839	
9,250.00	9,010.83	9,037.34	8,989.88	34.49	31.06	-88.94	-228.29	-587.83	1,484.31	1,421.89	62.42	23.780	
9,300.00	9,049.27	9,084.33	9,027.20	34.60	31.16	-89.01	-228.53	-616.09	1,484.51	1,421.90	62.61	23.709	
9,350.00	9,084.76	9,131.50	9,062.41	34.72	31.27	-89.08	-228.79	-647.45	1,484.75	1,421.89	62.85	23.623	
9,400.00	9,117.06	9,178.87	9,095.06	34.85	31.42	-89.16	-229.07	-681.76	1,485.00	1,421.87	63.13	23.522	
9,450.00	9,145.91	9,226.47	9,124.90	35.00	31.59	-89.25	-229.38	-718.83	1,485.28	1,421.82	63.46	23.405	
9,500.00	9,171.09	9,274.32	9,151.69	35.16	31.79	-89.34	-229.71	-758.45	1,485.59	1,421.74	63.84	23.269	
9,550.00	9,192.42	9,322.42	9,175.20	35.34	32.03	-89.44	-230.06	-800.40	1,485.91	1,421.63	64.28	23.115	
9,600.00	9,209.72	9,370.81	9,195.21	35.54	32.30	-89.54	-230.42	-844.44	1,486.26	1,421.47	64.78	22.941	
9,650.00	9,222.87	9,419.50	9,211.52	35.75	32.62	-89.65	-230.81	-890.30	1,486.62	1,421.28	65.35	22.750	
9,700.00	9,231.76	9,468.49	9,223.95	35.97	32.98	-89.76	-231.20	-937.67	1,487.01	1,421.04	65.97	22.540	
9,750.00	9,236.34	9,517.82	9,232.33	36.21	33.38	-89.87	-231.60	-986.26	1,487.40	1,420.75	66.65	22.315	
9,777.52	9,237.00	9,545.11	9,235.16	36.34	33.61	-89.93	-231.83	-1,013.40	1,487.63	1,420.58	67.05	22.186	
9,800.00	9,237.00	9,567.50	9,236.52	36.46	33.81	-89.98	-232.01	-1,035.76	1,487.81	1,420.43	67.39	22.078	
9,900.00	9,237.00	9,667.49	9,237.00	37.00	34.80	-90.00	-232.84	-1,135.73	1,488.64	1,419.64	69.01	21.572	
10,000.00	9,237.00	9,767.48	9,237.00	37.59	35.91	-90.00	-233.67	-1,235.72	1,489.48	1,418.68	70.79	21.040	
10,100.00	9,237.00	9,867.48	9,237.00	38.24	37.12	-90.00	-234.50	-1,335.71	1,490.31	1,417.57	72.74	20.488	
10,200.00	9,237.00	9,967.48	9,237.00	38.94	38.43	-90.00	-235.33	-1,435.71	1,491.14	1,416.30	74.84	19.925	
10,300.00	9,237.00	10,067.47	9,237.00	39.69	39.83	-90.00	-236.17	-1,535.70	1,491.97	1,414.90	77.07	19.358	
10,400.00	9,237.00	10,167.47	9,237.00	40.48	41.32	-90.00	-237.00	-1,635.69	1,492.80	1,413.37	79.43	18.794	
10,500.00	9,237.00	10,267.47	9,237.00	41.32	42.87	-90.00	-237.83	-1,735.69	1,493.63	1,411.73	81.90	18.237	
10,600.00	9,237.00	10,367.46	9,237.00	42.20	44.49	-90.00	-238.66	-1,835.68	1,494.46	1,409.99	84.47	17.692	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - ST01 - Plan #2 ST01													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HRGM, 8600-MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
10,700.00	9,237.00	10,467.46	9,237.00	43.12	46.17	-90.00	-239.49	-1,935.67	1,495.29	1,408.15	87.14	17.160		
10,800.00	9,237.00	10,567.46	9,237.00	44.08	47.90	-90.00	-240.32	-2,035.67	1,496.12	1,406.23	89.89	16.644		
10,900.00	9,237.00	10,667.45	9,237.00	45.07	49.67	-90.00	-241.15	-2,135.66	1,496.95	1,404.23	92.72	16.145		
11,000.00	9,237.00	10,767.45	9,237.00	46.09	51.49	-90.00	-241.98	-2,235.65	1,497.78	1,402.16	95.62	15.664		
11,100.00	9,237.00	10,867.45	9,237.00	47.14	53.34	-90.00	-242.81	-2,335.65	1,498.61	1,400.03	98.58	15.202		
11,200.00	9,237.00	10,967.44	9,237.00	48.22	55.23	-90.00	-243.64	-2,435.64	1,499.44	1,397.84	101.60	14.759		
11,300.00	9,237.00	11,067.44	9,237.00	49.32	57.15	-90.00	-244.47	-2,535.63	1,500.27	1,395.60	104.67	14.333		
11,400.00	9,237.00	11,167.44	9,237.00	50.45	59.09	-90.00	-245.30	-2,635.63	1,501.10	1,393.31	107.79	13.926		
11,500.00	9,237.00	11,267.43	9,237.00	51.60	61.06	-90.00	-246.13	-2,735.62	1,501.93	1,390.97	110.96	13.536		
11,600.00	9,237.00	11,367.43	9,237.00	52.77	63.05	-90.00	-246.96	-2,835.61	1,502.76	1,388.60	114.16	13.163		
11,700.00	9,237.00	11,467.42	9,237.00	53.96	65.06	-90.00	-247.79	-2,935.60	1,503.59	1,386.19	117.41	12.807		
11,800.00	9,237.00	11,567.42	9,237.00	55.17	67.09	-90.00	-248.62	-3,035.60	1,504.42	1,383.74	120.69	12.466		
11,900.00	9,237.00	11,667.42	9,237.00	56.39	69.14	-90.00	-249.45	-3,135.59	1,505.25	1,381.26	124.00	12.140		
12,000.00	9,237.00	11,767.41	9,237.00	57.63	71.20	-90.00	-250.28	-3,235.58	1,506.08	1,378.75	127.33	11.828		
12,100.00	9,237.00	11,867.41	9,237.00	58.88	73.28	-90.00	-251.11	-3,335.58	1,506.92	1,376.22	130.70	11.530		
12,200.00	9,237.00	11,967.41	9,237.00	60.15	75.37	-90.00	-251.94	-3,435.57	1,507.75	1,373.66	134.09	11.244		
12,300.00	9,237.00	12,067.40	9,237.00	61.43	77.47	-90.00	-252.77	-3,535.56	1,508.58	1,371.07	137.50	10.971		
12,400.00	9,237.00	12,167.40	9,237.00	62.72	79.58	-90.00	-253.60	-3,635.56	1,509.41	1,368.47	140.94	10.710		
12,500.00	9,237.00	12,267.40	9,237.00	64.03	81.70	-90.00	-254.43	-3,735.55	1,510.24	1,365.84	144.39	10.459		
12,600.00	9,237.00	12,367.39	9,237.00	65.34	83.83	-90.00	-255.27	-3,835.54	1,511.07	1,363.20	147.87	10.219		
12,700.00	9,237.00	12,467.39	9,237.00	66.67	85.97	-90.00	-256.10	-3,935.54	1,511.90	1,360.54	151.36	9.989		
12,800.00	9,237.00	12,567.39	9,237.00	68.00	88.12	-90.00	-256.93	-4,035.53	1,512.73	1,357.86	154.87	9.768		
12,900.00	9,237.00	12,667.38	9,237.00	69.34	90.27	-90.00	-257.76	-4,135.52	1,513.56	1,355.17	158.39	9.556		
13,000.00	9,237.00	12,767.38	9,237.00	70.69	92.43	-90.00	-258.59	-4,235.51	1,514.39	1,352.47	161.92	9.352		
13,100.00	9,237.00	12,867.38	9,237.00	72.05	94.60	-90.00	-259.42	-4,335.51	1,515.22	1,349.75	165.47	9.157		
13,200.00	9,237.00	12,967.37	9,237.00	73.42	96.77	-90.00	-260.25	-4,435.50	1,516.05	1,347.01	169.04	8.969		
13,300.00	9,237.00	13,067.37	9,237.00	74.79	98.95	-90.00	-261.08	-4,535.49	1,516.88	1,344.27	172.61	8.788		
13,400.00	9,237.00	13,167.37	9,237.00	76.17	101.14	-90.00	-261.91	-4,635.49	1,517.71	1,341.52	176.19	8.614		
13,500.00	9,237.00	13,267.36	9,237.00	77.55	103.33	-90.00	-262.74	-4,735.48	1,518.54	1,338.75	179.79	8.446		
13,600.00	9,237.00	13,367.36	9,237.00	78.95	105.52	-90.00	-263.57	-4,835.47	1,519.37	1,335.98	183.39	8.285		
13,700.00	9,237.00	13,467.36	9,237.00	80.34	107.72	-90.00	-264.40	-4,935.47	1,520.20	1,333.20	187.01	8.129		
13,800.00	9,237.00	13,567.35	9,237.00	81.74	109.92	-90.00	-265.23	-5,035.46	1,521.03	1,330.40	190.63	7.979		
13,900.00	9,237.00	13,667.35	9,237.00	83.15	112.13	-90.00	-266.06	-5,135.45	1,521.86	1,327.60	194.26	7.834		
14,000.00	9,237.00	13,767.35	9,237.00	84.56	114.34	-90.00	-266.89	-5,235.45	1,522.69	1,324.80	197.90	7.694		
14,100.00	9,237.00	13,867.34	9,237.00	85.98	116.55	-90.00	-267.72	-5,335.44	1,523.52	1,321.98	201.54	7.559		
14,200.00	9,237.00	13,967.34	9,237.00	87.40	118.76	-90.00	-268.55	-5,435.43	1,524.36	1,319.16	205.20	7.429		
14,300.00	9,237.00	14,067.34	9,237.00	88.83	120.98	-90.00	-269.38	-5,535.43	1,525.19	1,316.33	208.85	7.303		
14,400.00	9,237.00	14,167.33	9,237.00	90.25	123.21	-90.00	-270.21	-5,635.42	1,526.02	1,313.50	212.52	7.181		
14,500.00	9,237.00	14,267.33	9,237.00	91.69	125.43	-90.00	-271.04	-5,735.41	1,526.85	1,310.66	216.19	7.062		
14,600.00	9,237.00	14,367.32	9,237.00	93.12	127.66	-90.00	-271.87	-5,835.40	1,527.68	1,307.81	219.87	6.948		
14,700.00	9,237.00	14,467.32	9,237.00	94.56	129.89	-90.00	-272.70	-5,935.40	1,528.51	1,304.96	223.55	6.837		
14,800.00	9,237.00	14,567.32	9,237.00	96.00	132.12	-90.00	-273.54	-6,035.39	1,529.34	1,302.10	227.24	6.730		
14,900.00	9,237.00	14,667.31	9,237.00	97.45	134.35	-90.00	-274.37	-6,135.38	1,530.17	1,299.24	230.93	6.626		
14,927.52	9,237.00	14,694.83	9,237.00	97.85	134.97	-90.00	-274.59	-6,162.90	1,530.40	1,298.45	231.95	6.598		
15,000.00	9,237.00	14,767.31	9,237.00	98.90	136.59	-90.00	-275.20	-6,235.37	1,531.46	1,296.83	234.62	6.527		
15,100.00	9,237.00	14,867.26	9,237.00	100.35	138.83	-90.00	-276.03	-6,335.32	1,534.43	1,296.10	238.33	6.438		
15,200.00	9,237.00	14,967.15	9,237.00	101.81	141.06	-90.00	-276.86	-6,435.21	1,539.14	1,297.11	242.03	6.359		
15,300.00	9,237.00	15,066.94	9,237.00	103.28	143.30	-90.00	-277.68	-6,534.99	1,545.59	1,299.86	245.73	6.280		
15,400.00	9,237.00	15,166.60	9,237.00	104.75	145.54	-90.00	-278.51	-6,634.65	1,553.79	1,304.35	249.43	6.229		
15,427.52	9,237.00	15,194.00	9,237.00	105.16	146.15	-90.00	-278.74	-6,662.05	1,556.35	1,305.89	250.45	6.214		
15,500.00	9,237.00	15,266.15	9,237.00	106.22	147.77	-90.00	-279.34	-6,734.20	1,563.26	1,310.13	253.14	6.176		
15,600.00	9,237.00	15,365.69	9,237.00	107.70	150.01	-90.00	-280.17	-6,833.74	1,572.81	1,315.96	256.84	6.124		

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - ST01 - Plan #2 ST01													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HRGM, 8600-MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor	
15,700.00	9,237.00	15,465.24	9,237.00	109.18	152.25	-90.00	-280.99	-6,933.28	1,582.35	1,321.80	260.55	6.073		
15,800.00	9,237.00	15,564.78	9,237.00	110.65	154.49	-90.00	-281.82	-7,032.82	1,591.89	1,327.63	264.26	6.024		
15,900.00	9,237.00	15,664.32	9,237.00	112.14	156.73	-90.00	-282.65	-7,132.36	1,601.43	1,333.45	267.98	5.976		
16,000.00	9,237.00	15,763.87	9,237.00	113.62	158.97	-90.00	-283.47	-7,231.90	1,610.98	1,339.28	271.70	5.929		
16,100.00	9,237.00	15,863.41	9,237.00	115.10	161.21	-90.00	-284.30	-7,331.44	1,620.52	1,345.10	275.42	5.884		
16,200.00	9,237.00	15,962.96	9,237.00	116.59	163.46	-90.00	-285.13	-7,430.98	1,630.06	1,350.92	279.14	5.839		
16,300.00	9,237.00	16,062.50	9,237.00	118.07	165.70	-90.00	-285.95	-7,530.52	1,639.60	1,356.73	282.87	5.796		
16,400.00	9,237.00	16,162.04	9,237.00	119.56	167.95	-90.00	-286.78	-7,630.06	1,649.15	1,362.55	286.60	5.754		
16,500.00	9,237.00	16,261.59	9,237.00	121.05	170.20	-90.00	-287.61	-7,729.60	1,658.69	1,368.36	290.33	5.713		
16,600.00	9,237.00	16,361.13	9,237.00	122.54	172.45	-90.00	-288.43	-7,829.14	1,668.23	1,374.17	294.07	5.673		
16,700.00	9,237.00	16,460.67	9,237.00	124.04	174.70	-90.00	-289.28	-7,928.68	1,677.77	1,379.97	297.80	5.634		
16,800.00	9,237.00	16,560.22	9,237.00	125.53	176.95	-90.00	-290.09	-8,028.22	1,687.32	1,385.78	301.54	5.596		
16,900.00	9,237.00	16,659.76	9,237.00	127.03	179.20	-90.00	-290.91	-8,127.76	1,696.86	1,391.58	305.28	5.558		
17,000.00	9,237.00	16,759.30	9,237.00	128.52	181.45	-90.00	-291.74	-8,227.30	1,706.40	1,397.38	309.02	5.522		
17,100.00	9,237.00	16,858.85	9,237.00	130.02	183.70	-90.00	-292.57	-8,326.84	1,715.94	1,403.18	312.77	5.486		
17,200.00	9,237.00	16,958.39	9,237.00	131.52	185.96	-90.00	-293.39	-8,426.38	1,725.49	1,408.97	316.52	5.452		
17,300.00	9,237.00	17,057.94	9,237.00	133.02	188.21	-90.00	-294.22	-8,525.92	1,735.03	1,414.77	320.26	5.418		
17,400.00	9,237.00	17,157.48	9,237.00	134.52	190.47	-90.00	-295.05	-8,625.46	1,744.57	1,420.56	324.01	5.384		
17,500.00	9,237.00	17,257.02	9,237.00	136.02	192.73	-90.00	-295.87	-8,725.00	1,754.11	1,426.35	327.76	5.352		
17,600.00	9,237.00	17,356.57	9,237.00	137.52	194.98	-90.00	-296.70	-8,824.54	1,763.66	1,432.14	331.52	5.320		
17,677.52	9,237.00	17,433.73	9,237.00	138.69	196.73	-90.00	-297.34	-8,901.70	1,771.05	1,436.63	334.43	5.296		
17,700.00	9,237.00	17,456.11	9,237.00	139.03	197.24	-90.00	-297.53	-8,924.09	1,773.16	1,437.88	335.27	5.289		
17,800.00	9,237.00	17,555.77	9,237.00	140.53	199.50	-90.00	-298.35	-9,023.74	1,781.44	1,442.41	339.03	5.254		
17,900.00	9,237.00	17,655.55	9,237.00	142.03	201.77	-90.00	-299.18	-9,123.52	1,787.98	1,445.18	342.80	5.216		
18,000.00	9,237.00	17,755.44	9,237.00	143.53	204.03	-90.00	-300.01	-9,223.40	1,792.78	1,446.21	346.57	5.173		
18,100.00	9,237.00	17,855.39	9,237.00	145.03	206.30	-90.00	-300.84	-9,323.35	1,795.84	1,445.49	350.34	5.126		
18,177.52	9,237.00	17,932.90	9,237.00	146.19	208.06	-90.00	-301.49	-9,400.85	1,797.00	1,443.73	353.27	5.087		
18,200.00	9,237.00	17,955.38	9,237.00	146.53	208.57	-90.00	-301.67	-9,423.34	1,797.19	1,443.07	354.12	5.075		
18,300.00	9,237.00	18,055.38	9,237.00	148.03	210.85	-90.00	-302.50	-9,523.33	1,798.02	1,440.12	357.90	5.024		
18,400.00	9,237.00	18,155.37	9,237.00	149.53	213.12	-90.00	-303.33	-9,623.32	1,798.85	1,437.17	361.68	4.974		
18,500.00	9,237.00	18,255.37	9,237.00	151.02	215.39	-90.00	-304.16	-9,723.31	1,799.68	1,434.22	365.46	4.924		
18,600.00	9,237.00	18,355.37	9,237.00	152.52	217.66	-90.00	-304.99	-9,823.31	1,800.51	1,431.27	369.24	4.876		
18,700.00	9,237.00	18,455.36	9,237.00	154.03	219.94	-90.00	-305.82	-9,923.30	1,801.34	1,428.32	373.02	4.829		
18,800.00	9,237.00	18,555.36	9,237.00	155.53	222.21	-90.00	-306.65	-10,023.29	1,802.17	1,425.37	376.81	4.783		
18,900.00	9,237.00	18,655.36	9,237.00	157.03	224.49	-90.00	-307.49	-10,123.29	1,803.00	1,422.41	380.59	4.737		
19,000.00	9,237.00	18,755.35	9,237.00	158.53	226.76	-90.00	-308.32	-10,223.28	1,803.83	1,419.46	384.38	4.693		
19,100.00	9,237.00	18,855.35	9,237.00	160.04	229.04	-90.00	-309.15	-10,323.27	1,804.66	1,416.50	388.16	4.649		
19,200.00	9,237.00	18,955.35	9,237.00	161.54	231.31	-90.00	-309.98	-10,423.27	1,805.49	1,413.54	391.95	4.606		
19,300.00	9,237.00	19,055.34	9,237.00	163.04	233.59	-90.00	-310.81	-10,523.26	1,806.33	1,410.59	395.74	4.564		
19,400.00	9,237.00	19,155.34	9,237.00	164.55	235.87	-90.00	-311.64	-10,623.25	1,807.16	1,407.63	399.53	4.523		
19,481.94	9,237.00	19,237.28	9,237.00	165.57	237.73	-90.00	-312.32	-10,705.19	1,807.84	1,405.43	402.40	4.493		

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HRGM													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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-88.85	0.50	-25.00	25.01				
100.00	100.00	100.00	100.00	0.13	0.13	-88.85	0.50	-25.00	25.01	24.74	0.27	94.263	
200.00	200.00	200.00	200.00	0.49	0.49	-88.85	0.50	-25.00	25.01	24.02	0.98	25.458	
300.00	300.00	300.00	300.00	0.85	0.85	-88.85	0.50	-25.00	25.01	23.31	1.70	14.716	
400.00	400.00	400.00	400.00	1.21	1.21	-88.85	0.50	-25.00	25.01	22.59	2.42	10.349	
500.00	500.00	500.00	500.00	1.57	1.57	-88.85	0.50	-25.00	25.01	21.87	3.13	7.981	
600.00	600.00	600.00	600.00	1.92	1.92	-88.85	0.50	-25.00	25.01	21.16	3.85	6.495	
700.00	700.00	700.00	700.00	2.28	2.28	-88.85	0.50	-25.00	25.01	20.44	4.57	5.475	
800.00	800.00	800.00	800.00	2.64	2.64	-88.85	0.50	-25.00	25.01	19.72	5.28	4.732	
900.00	900.00	900.00	900.00	3.00	3.00	-88.85	0.50	-25.00	25.01	19.00	6.00	4.167	
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	-88.85	0.50	-25.00	25.01	18.29	6.72	3.722	
1,100.00	1,100.00	1,100.00	1,100.00	3.72	3.72	-88.85	0.50	-25.00	25.01	17.57	7.43	3.363	
1,200.00	1,200.00	1,200.00	1,200.00	4.08	4.08	-88.85	0.50	-25.00	25.01	16.85	8.15	3.067	
1,300.00	1,300.00	1,300.00	1,300.00	4.43	4.43	-88.85	0.50	-25.00	25.01	16.14	8.87	2.820	
1,400.00	1,400.00	1,400.00	1,400.00	4.79	4.79	-88.85	0.50	-25.00	25.01	15.42	9.59	2.609	
1,500.00	1,500.00	1,500.00	1,500.00	5.15	5.15	-88.85	0.50	-25.00	25.01	14.70	10.30	2.427	
1,600.00	1,600.00	1,600.00	1,600.00	5.51	5.51	-88.85	0.50	-25.00	25.01	13.99	11.02	2.269	
1,700.00	1,700.00	1,700.00	1,700.00	5.87	5.87	-88.85	0.50	-25.00	25.01	13.27	11.74	2.131	
1,800.00	1,800.00	1,800.00	1,800.00	6.23	6.23	-88.85	0.50	-25.00	25.01	12.55	12.45	2.008	
1,900.00	1,900.00	1,900.00	1,900.00	6.59	6.59	-88.85	0.50	-25.00	25.01	11.83	13.17	1.899	
2,000.00	2,000.00	2,000.00	2,000.00	6.94	6.94	-88.85	0.50	-25.00	25.01	11.12	13.89	1.801	
2,100.00	2,100.00	2,100.00	2,100.00	7.30	7.30	-88.85	0.50	-25.00	25.01	10.40	14.60	1.712	
2,200.00	2,200.00	2,200.00	2,200.00	7.66	7.66	-88.85	0.50	-25.00	25.01	9.68	15.32	1.632	
2,300.00	2,300.00	2,300.00	2,300.00	8.02	8.02	-88.85	0.50	-25.00	25.01	8.97	16.04	1.559	
2,400.00	2,400.00	2,400.00	2,400.00	8.38	8.38	-88.85	0.50	-25.00	25.01	8.25	16.75	1.492 Level 3	
2,500.00	2,500.00	2,500.00	2,500.00	8.74	8.74	-88.85	0.50	-25.00	25.01	7.53	17.47	1.431 Level 3, CC, ES, SF	
2,600.00	2,600.00	2,599.19	2,599.17	9.09	9.08	-90.56	-0.26	-26.54	26.55	8.39	18.16	1.462 Level 3	
2,700.00	2,700.00	2,688.15	2,697.99	9.45	9.41	-94.65	-2.53	-31.14	31.31	12.48	18.82	1.663	
2,800.00	2,799.98	2,796.59	2,796.06	9.81	9.74	-81.73	-6.30	-38.75	39.17	19.72	19.46	2.013	
2,900.00	2,899.84	2,895.68	2,894.59	10.17	10.08	-90.68	-10.97	-48.22	48.37	29.24	20.13	2.452	
3,000.00	2,999.45	2,994.63	2,992.97	10.53	10.42	-99.64	-15.65	-57.69	60.90	40.08	20.82	2.925	
3,100.00	3,098.70	3,093.16	3,090.94	10.88	10.76	-108.12	-20.31	-67.12	74.50	52.99	21.52	3.462	
3,200.00	3,197.47	3,191.17	3,188.39	11.24	11.11	-115.79	-24.95	-76.49	90.75	68.53	22.22	4.084	
3,300.00	3,295.62	3,288.54	3,285.20	11.60	11.45	-122.49	-29.55	-85.81	110.01	87.08	22.83	4.798	
3,400.00	3,393.06	3,385.14	3,381.26	11.97	11.79	-128.24	-34.12	-95.05	132.50	108.87	23.63	5.607	
3,500.00	3,489.64	3,480.87	3,476.43	12.34	12.14	-133.10	-38.64	-104.21	158.33	134.00	24.34	6.506	
3,600.00	3,585.27	3,575.60	3,570.62	12.72	12.47	-137.20	-43.12	-113.28	187.54	162.50	25.04	7.489	
3,692.53	3,672.79	3,662.26	3,656.79	13.09	12.79	-140.41	-47.22	-121.57	217.55	191.87	25.69	8.470	
3,700.00	3,679.82	3,669.22	3,663.70	13.12	12.81	-140.88	-47.55	-122.24	220.09	194.35	25.74	8.551	
3,800.00	3,773.88	3,762.33	3,756.28	13.52	13.15	-143.79	-51.95	-131.15	254.48	228.04	26.43	9.627	
3,900.00	3,867.94	3,855.44	3,848.86	13.94	13.49	-146.17	-56.35	-140.06	289.37	262.24	27.13	10.667	
4,000.00	3,961.99	3,948.55	3,941.44	14.36	13.83	-148.03	-60.76	-148.97	324.61	296.79	27.83	11.665	
4,100.00	4,056.05	4,041.86	4,034.02	14.80	14.17	-149.54	-65.16	-157.88	360.10	331.57	28.53	12.622	
4,200.00	4,150.11	4,134.78	4,126.60	15.24	14.51	-150.77	-69.56	-166.78	395.77	366.53	29.23	13.538	
4,300.00	4,244.17	4,227.89	4,219.19	15.69	14.85	-151.80	-73.97	-175.69	431.57	401.62	29.94	14.414	
4,400.00	4,338.23	4,321.00	4,311.77	16.14	15.19	-152.68	-78.37	-184.60	467.47	436.82	30.65	15.251	
4,500.00	4,432.28	4,414.11	4,404.35	16.60	15.54	-153.42	-82.77	-193.51	503.45	472.09	31.36	16.052	
4,600.00	4,526.34	4,507.23	4,496.93	17.07	15.88	-154.07	-87.17	-202.42	539.50	507.42	32.08	16.817	
4,700.00	4,620.40	4,600.34	4,589.51	17.54	16.23	-154.64	-91.58	-211.33	575.61	542.81	32.80	17.549	
4,800.00	4,714.46	4,693.45	4,682.09	18.01	16.58	-155.14	-95.98	-220.24	611.75	578.23	33.52	18.250	
4,900.00	4,808.52	4,786.56	4,774.67	18.49	16.92	-155.59	-100.38	-229.15	647.94	613.69	34.24	18.921	
5,000.00	4,902.57	4,879.67	4,867.25	18.98	17.27	-155.99	-104.78	-238.06	684.15	649.18	34.97	19.564	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HRGM													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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,996.63	4,972.79	4,959.83	19.46	17.62	-156.35	-109.19	-246.97	720.39	684.69	35.70	20.180		
5,200.00	5,090.69	5,065.90	5,052.41	19.96	17.97	-156.67	-113.59	-255.88	756.65	720.22	36.43	20.771		
5,300.00	5,184.75	5,159.01	5,144.99	20.45	18.32	-156.97	-117.99	-264.79	792.93	755.77	37.16	21.338		
5,400.00	5,278.81	5,252.12	5,237.57	20.95	18.67	-157.23	-122.39	-273.70	829.23	791.34	37.89	21.883		
5,500.00	5,372.87	5,345.24	5,330.15	21.44	19.02	-157.48	-126.80	-282.61	865.54	826.91	38.63	22.407		
5,600.00	5,466.92	5,438.35	5,422.73	21.95	19.37	-157.71	-131.20	-291.52	901.87	862.50	39.37	22.910		
5,700.00	5,560.98	5,531.46	5,515.31	22.45	19.72	-157.92	-135.60	-300.43	938.21	898.10	40.10	23.394		
5,800.00	5,655.04	5,624.57	5,607.89	22.96	20.07	-158.11	-140.01	-309.34	974.55	933.71	40.84	23.860		
5,900.00	5,749.10	5,717.68	5,700.47	23.46	20.42	-158.29	-144.41	-318.25	1,010.91	969.32	41.59	24.309		
6,000.00	5,843.16	5,810.80	5,793.05	23.97	20.78	-158.46	-148.81	-327.16	1,047.27	1,004.94	42.33	24.741		
6,100.00	5,937.21	5,903.91	5,885.63	24.49	21.13	-158.61	-153.21	-336.07	1,083.64	1,040.57	43.07	25.159		
6,200.00	6,031.27	5,997.02	5,978.21	25.00	21.48	-158.76	-157.62	-344.98	1,120.02	1,078.20	43.82	25.561		
6,300.00	6,125.33	6,090.13	6,070.79	25.52	21.84	-158.89	-162.02	-353.89	1,156.40	1,111.84	44.56	25.949		
6,400.00	6,219.39	6,183.25	6,163.37	26.03	22.19	-159.02	-166.42	-362.80	1,192.79	1,147.48	45.31	26.324		
6,500.00	6,313.45	6,276.36	6,255.95	26.55	22.54	-159.14	-170.82	-371.71	1,229.18	1,183.12	46.06	26.687		
6,600.00	6,407.51	6,369.47	6,348.53	27.07	22.90	-159.26	-175.23	-380.62	1,265.58	1,218.77	46.81	27.037		
6,620.95	6,427.21	6,388.98	6,367.93	27.18	22.97	-159.28	-176.15	-382.48	1,273.21	1,226.24	46.97	27.109		
6,700.00	6,501.92	6,462.95	6,441.48	27.58	23.25	-159.56	-179.65	-389.56	1,301.03	1,253.47	47.56	27.356		
6,800.00	6,597.41	6,557.54	6,535.53	28.08	23.61	-159.82	-184.12	-398.61	1,333.47	1,285.16	48.31	27.601		
6,900.00	6,693.88	6,653.13	6,630.58	28.55	23.98	-160.01	-188.64	-407.76	1,362.79	1,313.73	49.06	27.775		
7,000.00	6,791.20	6,749.63	6,726.52	29.00	24.35	-160.12	-193.20	-416.99	1,388.97	1,339.15	49.82	27.881		
7,100.00	6,889.27	6,846.90	6,823.24	29.43	24.72	-160.16	-197.80	-426.30	1,411.96	1,361.40	50.57	27.922		
7,200.00	6,987.96	6,944.83	6,920.61	29.84	25.09	-160.13	-202.43	-435.67	1,431.76	1,380.45	51.31	27.902		
7,300.00	7,087.15	7,043.30	7,018.52	30.22	25.47	-160.04	-207.09	-445.09	1,448.35	1,396.29	52.06	27.823		
7,400.00	7,186.72	7,142.20	7,116.85	30.58	25.85	-159.88	-211.76	-454.56	1,461.71	1,408.92	52.79	27.688		
7,500.00	7,286.55	7,241.39	7,215.47	30.91	26.22	-159.65	-216.45	-464.05	1,471.86	1,418.34	53.52	27.501		
7,600.00	7,386.52	7,347.00	7,320.49	31.23	26.63	-159.34	-221.39	-474.05	1,478.75	1,424.46	54.29	27.239		
7,613.48	7,400.00	7,364.57	7,337.98	31.27	26.69	-179.11	-222.13	-475.54	1,479.36	1,424.94	54.42	27.186		
7,700.00	7,486.52	7,477.80	7,450.91	31.52	27.11	-178.83	-225.73	-482.82	1,482.22	1,426.99	55.22	26.840		
7,800.00	7,586.52	7,609.22	7,582.27	31.82	27.58	-178.70	-227.43	-486.25	1,483.56	1,427.45	56.12	26.437		
7,900.00	7,686.52	7,713.48	7,686.52	32.12	27.93	-178.70	-227.45	-486.30	1,483.58	1,426.77	56.81	26.115		
8,000.00	7,786.52	7,813.48	7,786.52	32.43	28.26	-178.70	-227.45	-486.30	1,483.58	1,426.11	57.48	25.812		
8,100.00	7,886.52	7,913.48	7,886.52	32.73	28.60	-178.70	-227.45	-486.30	1,483.58	1,425.44	58.14	25.516		
8,200.00	7,986.52	8,013.48	7,986.52	33.03	28.93	-178.70	-227.45	-486.30	1,483.58	1,424.77	58.81	25.225		
8,300.00	8,086.52	8,113.48	8,086.52	33.34	29.27	-178.70	-227.45	-486.30	1,483.58	1,424.10	59.48	24.941		
8,400.00	8,186.52	8,213.48	8,186.52	33.64	29.61	-178.70	-227.45	-486.30	1,483.58	1,423.43	60.16	24.663		
8,500.00	8,286.52	8,313.48	8,286.52	33.95	29.94	-178.70	-227.45	-486.30	1,483.58	1,422.75	60.83	24.390		
8,600.00	8,386.52	8,413.48	8,386.52	34.11	30.28	-178.70	-227.45	-486.30	1,483.58	1,422.25	61.34	24.188		
8,700.00	8,486.52	8,513.48	8,486.52	34.11	30.62	-178.70	-227.45	-486.30	1,483.58	1,421.90	61.68	24.053		
8,800.00	8,586.52	8,613.48	8,586.52	34.12	30.96	-178.70	-227.45	-486.30	1,483.58	1,421.55	62.03	23.917		
8,877.52	8,664.04	8,690.99	8,664.04	34.13	31.22	-178.70	-227.45	-486.30	1,483.58	1,421.28	62.30	23.812		
8,900.00	8,686.52	8,713.47	8,686.52	34.13	31.30	-88.72	-227.45	-486.30	1,483.57	1,421.19	62.38	23.781		
8,950.00	8,736.33	8,763.28	8,736.33	34.15	31.47	-88.89	-227.45	-486.30	1,483.48	1,420.92	62.57	23.711		
9,000.00	8,785.59	8,812.55	8,785.59	34.17	31.64	-89.22	-227.45	-486.30	1,483.34	1,420.59	62.75	23.639		
9,050.00	8,833.93	8,860.88	8,833.93	34.21	31.80	-89.71	-227.45	-486.30	1,483.22	1,420.28	62.94	23.567		
9,074.86	8,857.50	8,884.46	8,857.50	34.24	31.88	-90.00	-227.45	-486.30	1,483.20	1,420.17	63.03	23.531		
9,100.00	8,880.97	8,907.83	8,880.97	34.26	31.96	-90.32	-227.45	-486.30	1,483.23	1,420.10	63.12	23.497		
9,150.00	8,926.37	8,953.32	8,926.37	34.33	32.11	-91.03	-227.45	-486.30	1,483.50	1,420.19	63.31	23.433		
9,200.00	8,969.76	8,996.72	8,969.76	34.40	32.26	-91.79	-227.45	-486.30	1,484.21	1,420.72	63.49	23.377		
9,250.00	9,010.83	9,037.79	9,010.83	34.49	32.40	-92.56	-227.45	-486.30	1,485.53	1,421.86	63.67	23.332		
9,300.00	9,049.27	9,076.22	9,049.27	34.60	32.53	-93.29	-227.45	-486.30	1,487.67	1,423.82	63.84	23.302		
9,350.00	9,084.76	9,111.72	9,084.76	34.72	32.65	-93.94	-227.45	-486.30	1,490.80	1,426.79	64.01	23.290		

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HRGM													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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,400.00	9,117.06	9,144.02	9,117.06	34.85	32.76	-94.45	-227.45	-486.30	1,485.13	1,430.96	64.17	23.300	
9,450.00	9,145.91	9,172.86	9,145.91	35.00	32.86	-94.78	-227.45	-486.30	1,500.83	1,436.50	64.32	23.333	
9,500.00	9,171.09	9,198.05	9,171.09	35.16	32.95	-94.89	-227.45	-486.30	1,508.03	1,443.56	64.46	23.393	
9,550.00	9,192.42	9,219.37	9,192.42	35.34	33.02	-94.74	-227.45	-486.30	1,516.85	1,452.25	64.60	23.482	
9,600.00	9,209.72	9,236.67	9,209.72	35.54	33.08	-94.29	-227.45	-486.30	1,527.36	1,462.64	64.72	23.601	
9,650.00	9,222.87	9,249.82	9,222.87	35.75	33.13	-93.52	-227.45	-486.30	1,539.58	1,474.76	64.82	23.750	
9,700.00	9,231.76	9,258.72	9,231.76	35.97	33.16	-92.41	-227.45	-486.30	1,553.50	1,488.58	64.92	23.930	
9,750.00	9,236.34	9,263.29	9,236.34	36.21	33.17	-90.95	-227.45	-486.30	1,569.02	1,504.02	65.00	24.140	
9,777.52	9,237.00	9,263.95	9,237.00	36.34	33.17	-90.00	-227.45	-486.30	1,578.21	1,513.17	65.03	24.268	
9,800.00	9,237.00	9,263.95	9,237.00	36.46	33.17	-90.00	-227.45	-486.30	1,586.03	1,520.97	65.06	24.378	
9,800.00	9,237.00	9,263.95	9,237.00	37.00	33.17	-90.00	-227.45	-486.30	1,624.15	1,558.96	65.18	24.917	
10,000.00	9,237.00	9,263.95	9,237.00	37.59	33.17	-90.00	-227.45	-486.30	1,667.40	1,602.09	65.30	25.533	
10,100.00	9,237.00	9,263.95	9,237.00	38.24	33.17	-90.00	-227.45	-486.30	1,715.39	1,649.97	65.42	26.221	
10,200.00	9,237.00	9,263.95	9,237.00	38.94	33.17	-90.00	-227.45	-486.30	1,767.75	1,702.21	65.53	26.975	
10,300.00	9,237.00	9,263.95	9,237.00	39.69	33.17	-90.00	-227.45	-486.30	1,824.08	1,758.44	65.64	27.790	
10,400.00	9,237.00	9,263.95	9,237.00	40.48	33.17	-90.00	-227.45	-486.30	1,884.05	1,818.31	65.74	28.660	
10,500.00	9,237.00	9,263.95	9,237.00	41.32	33.17	-90.00	-227.45	-486.30	1,947.31	1,881.47	65.83	29.580	
10,600.00	9,237.00	9,263.95	9,237.00	42.20	33.17	-90.00	-227.45	-486.30	2,013.54	1,947.63	65.92	30.546	
10,700.00	9,237.00	9,263.95	9,237.00	43.12	33.17	-90.00	-227.45	-486.30	2,082.48	2,016.48	66.00	31.554	
10,800.00	9,237.00	9,263.95	9,237.00	44.08	33.17	-90.00	-227.45	-486.30	2,153.85	2,087.78	66.07	32.598	
10,900.00	9,237.00	9,263.95	9,237.00	45.07	33.17	-90.00	-227.45	-486.30	2,227.43	2,161.28	66.14	33.676	
11,000.00	9,237.00	9,263.95	9,237.00	46.09	33.17	-90.00	-227.45	-486.30	2,303.00	2,236.79	66.21	34.785	
11,100.00	9,237.00	9,263.95	9,237.00	47.14	33.17	-90.00	-227.45	-486.30	2,380.37	2,314.10	66.27	35.920	
11,200.00	9,237.00	9,263.95	9,237.00	48.22	33.17	-90.00	-227.45	-486.30	2,459.37	2,393.05	66.33	37.080	
11,300.00	9,237.00	9,263.95	9,237.00	49.32	33.17	-90.00	-227.45	-486.30	2,539.86	2,473.47	66.38	38.262	
11,400.00	9,237.00	9,263.95	9,237.00	50.45	33.17	-90.00	-227.45	-486.30	2,621.68	2,555.25	66.43	39.464	
11,500.00	9,237.00	9,263.95	9,237.00	51.60	33.17	-90.00	-227.45	-486.30	2,704.73	2,638.25	66.48	40.684	
11,600.00	9,237.00	9,263.95	9,237.00	52.77	33.17	-90.00	-227.45	-486.30	2,788.90	2,722.37	66.53	41.919	
11,700.00	9,237.00	9,263.95	9,237.00	53.96	33.17	-90.00	-227.45	-486.30	2,874.07	2,807.50	66.58	43.170	
11,800.00	9,237.00	9,263.95	9,237.00	55.17	33.17	-90.00	-227.45	-486.30	2,960.18	2,893.56	66.62	44.433	
11,900.00	9,237.00	9,263.95	9,237.00	56.39	33.17	-90.00	-227.45	-486.30	3,047.13	2,980.47	66.66	45.708	
12,000.00	9,237.00	9,263.95	9,237.00	57.63	33.17	-90.00	-227.45	-486.30	3,134.86	3,068.16	66.71	46.994	
12,100.00	9,237.00	9,263.95	9,237.00	58.88	33.17	-90.00	-227.45	-486.30	3,223.31	3,156.56	66.75	48.290	
12,200.00	9,237.00	9,263.95	9,237.00	60.15	33.17	-90.00	-227.45	-486.30	3,312.41	3,245.62	66.79	49.593	
12,300.00	9,237.00	9,263.95	9,237.00	61.43	33.17	-90.00	-227.45	-486.30	3,402.12	3,335.29	66.83	50.905	
12,400.00	9,237.00	9,263.95	9,237.00	62.72	33.17	-90.00	-227.45	-486.30	3,492.39	3,425.52	66.87	52.223	
12,500.00	9,237.00	9,263.95	9,237.00	64.03	33.17	-90.00	-227.45	-486.30	3,583.18	3,516.28	66.92	53.548	
12,600.00	9,237.00	9,263.95	9,237.00	65.34	33.17	-90.00	-227.45	-486.30	3,674.44	3,607.49	66.96	54.878	
12,700.00	9,237.00	9,263.95	9,237.00	66.67	33.17	-90.00	-227.45	-486.30	3,766.15	3,699.15	67.00	56.213	
12,800.00	9,237.00	9,263.95	9,237.00	68.00	33.17	-90.00	-227.45	-486.30	3,858.27	3,791.23	67.04	57.552	
12,900.00	9,237.00	9,263.95	9,237.00	69.34	33.17	-90.00	-227.45	-486.30	3,950.77	3,883.69	67.08	58.895	
13,000.00	9,237.00	9,263.95	9,237.00	70.69	33.17	-90.00	-227.45	-486.30	4,043.63	3,976.51	67.12	60.242	
13,100.00	9,237.00	9,263.95	9,237.00	72.05	33.17	-90.00	-227.45	-486.30	4,136.82	4,069.66	67.17	61.591	
13,200.00	9,237.00	9,263.95	9,237.00	73.42	33.17	-90.00	-227.45	-486.30	4,230.33	4,163.12	67.21	62.943	
13,300.00	9,237.00	9,263.95	9,237.00	74.79	33.17	-90.00	-227.45	-486.30	4,324.12	4,256.87	67.25	64.297	
13,400.00	9,237.00	9,263.95	9,237.00	76.17	33.17	-90.00	-227.45	-486.30	4,418.19	4,350.89	67.30	65.652	
13,500.00	9,237.00	9,263.95	9,237.00	77.55	33.17	-90.00	-227.45	-486.30	4,512.51	4,445.17	67.34	67.010	
13,600.00	9,237.00	9,263.95	9,237.00	78.95	33.17	-90.00	-227.45	-486.30	4,607.07	4,539.68	67.39	68.368	
13,700.00	9,237.00	9,263.95	9,237.00	80.34	33.17	-90.00	-227.45	-486.30	4,701.86	4,634.43	67.43	69.727	
13,800.00	9,237.00	9,263.95	9,237.00	81.74	33.17	-90.00	-227.45	-486.30	4,796.86	4,729.38	67.48	71.087	
13,900.00	9,237.00	9,263.95	9,237.00	83.15	33.17	-90.00	-227.45	-486.30	4,892.05	4,824.53	67.53	72.447	
14,000.00	9,237.00	9,263.95	9,237.00	84.56	33.17	-90.00	-227.45	-486.30	4,987.44	4,919.86	67.57	73.808	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH												Offset Site Error:	0.00 usft
Survey Program: O-MWD+HRGM												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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,100.00	9,237.00	9,263.95	9,237.00	85.98	33.17	-90.00	-227.45	-486.30	5,083.00	5,015.38	67.62	75.168	
14,200.00	9,237.00	9,263.95	9,237.00	87.40	33.17	-90.00	-227.45	-486.30	5,178.73	5,111.06	67.67	76.528	
14,300.00	9,237.00	9,263.95	9,237.00	88.83	33.17	-90.00	-227.45	-486.30	5,274.62	5,206.90	67.72	77.888	
14,400.00	9,237.00	9,263.95	9,237.00	90.25	33.17	-90.00	-227.45	-486.30	5,370.66	5,302.89	67.77	79.248	
14,500.00	9,237.00	9,263.95	9,237.00	91.69	33.17	-90.00	-227.45	-486.30	5,466.84	5,399.02	67.82	80.605	
14,600.00	9,237.00	9,263.95	9,237.00	93.12	33.17	-90.00	-227.45	-486.30	5,563.15	5,495.28	67.87	81.962	
14,700.00	9,237.00	9,263.95	9,237.00	94.56	33.17	-90.00	-227.45	-486.30	5,659.60	5,591.67	67.93	83.318	
14,800.00	9,237.00	9,263.95	9,237.00	96.00	33.17	-90.00	-227.45	-486.30	5,756.16	5,688.18	67.98	84.673	
14,900.00	9,237.00	9,263.95	9,237.00	97.45	33.17	-90.00	-227.45	-486.30	5,852.84	5,784.81	68.04	86.026	
14,927.52	9,237.00	9,263.95	9,237.00	97.85	33.17	-90.00	-227.45	-486.30	5,879.46	5,811.41	68.05	86.398	
15,000.00	9,237.00	9,263.95	9,237.00	98.90	33.17	-90.00	-227.45	-486.30	5,949.74	5,881.65	68.09	87.379	
15,100.00	9,237.00	9,263.95	9,237.00	100.35	33.17	-90.00	-227.45	-486.30	6,047.14	5,978.99	68.15	88.736	
15,200.00	9,237.00	9,263.95	9,237.00	101.81	33.17	-90.00	-227.45	-486.30	6,144.99	6,076.78	68.21	90.096	
15,300.00	9,237.00	9,263.95	9,237.00	103.28	33.17	-90.00	-227.45	-486.30	6,243.24	6,174.98	68.26	91.458	
15,400.00	9,237.00	9,263.95	9,237.00	104.75	33.17	-90.00	-227.45	-486.30	6,341.85	6,273.53	68.32	92.822	
15,427.52	9,237.00	9,263.95	9,237.00	105.16	33.17	-90.00	-227.45	-486.30	6,369.04	6,300.70	68.34	93.198	
15,500.00	9,237.00	9,263.95	9,237.00	106.22	33.17	-90.00	-227.45	-486.30	6,440.71	6,372.33	68.38	94.187	
15,600.00	9,237.00	9,263.95	9,237.00	107.70	33.17	-90.00	-227.45	-486.30	6,539.61	6,471.17	68.44	95.549	
15,700.00	9,237.00	9,263.95	9,237.00	109.18	33.17	-90.00	-227.45	-486.30	6,638.54	6,570.04	68.50	96.908	
15,800.00	9,237.00	9,263.95	9,237.00	110.65	33.17	-90.00	-227.45	-486.30	6,737.51	6,668.94	68.57	98.263	
15,900.00	9,237.00	9,263.95	9,237.00	112.14	33.17	-90.00	-227.45	-486.30	6,836.50	6,767.87	68.63	99.616	
16,000.00	9,237.00	9,263.95	9,237.00	113.62	33.17	-90.00	-227.45	-486.30	6,935.52	6,866.83	68.69	100.966	
16,100.00	9,237.00	9,263.95	9,237.00	115.10	33.17	-90.00	-227.45	-486.30	7,034.58	6,965.82	68.78	102.312	
16,200.00	9,237.00	9,263.95	9,237.00	116.59	33.17	-90.00	-227.45	-486.30	7,133.65	7,064.83	68.82	103.655	
16,300.00	9,237.00	9,263.95	9,237.00	118.07	33.17	-90.00	-227.45	-486.30	7,232.76	7,163.87	68.89	104.995	
16,400.00	9,237.00	9,263.95	9,237.00	119.56	33.17	-90.00	-227.45	-486.30	7,331.88	7,262.93	68.95	106.331	
16,500.00	9,237.00	9,263.95	9,237.00	121.05	33.17	-90.00	-227.45	-486.30	7,431.03	7,362.01	69.02	107.664	
16,600.00	9,237.00	9,263.95	9,237.00	122.54	33.17	-90.00	-227.45	-486.30	7,530.21	7,461.12	69.09	108.993	
16,700.00	9,237.00	9,263.95	9,237.00	124.04	33.17	-90.00	-227.45	-486.30	7,629.40	7,560.25	69.16	110.319	
16,800.00	9,237.00	9,263.95	9,237.00	125.53	33.17	-90.00	-227.45	-486.30	7,728.62	7,659.39	69.23	111.642	
16,900.00	9,237.00	9,263.95	9,237.00	127.03	33.17	-90.00	-227.45	-486.30	7,827.85	7,758.56	69.30	112.960	
17,000.00	9,237.00	9,263.95	9,237.00	128.52	33.17	-90.00	-227.45	-486.30	7,927.11	7,857.74	69.37	114.276	
17,100.00	9,237.00	9,263.95	9,237.00	130.02	33.17	-90.00	-227.45	-486.30	8,026.38	7,956.94	69.44	115.587	
17,200.00	9,237.00	9,263.95	9,237.00	131.52	33.17	-90.00	-227.45	-486.30	8,125.67	8,056.18	69.51	116.895	
17,300.00	9,237.00	9,263.95	9,237.00	133.02	33.17	-90.00	-227.45	-486.30	8,224.98	8,155.40	69.59	118.199	
17,400.00	9,237.00	9,263.95	9,237.00	134.52	33.17	-90.00	-227.45	-486.30	8,324.31	8,254.65	69.66	119.500	
17,500.00	9,237.00	9,263.95	9,237.00	136.02	33.17	-90.00	-227.45	-486.30	8,423.65	8,353.91	69.73	120.796	
17,600.00	9,237.00	9,263.95	9,237.00	137.52	33.17	-90.00	-227.45	-486.30	8,523.00	8,453.19	69.81	122.089	
17,677.52	9,237.00	9,263.95	9,237.00	138.69	33.17	-90.00	-227.45	-486.30	8,600.03	8,530.16	69.87	123.089	
17,700.00	9,237.00	9,263.95	9,237.00	139.03	33.17	-90.00	-227.45	-486.30	8,622.37	8,552.48	69.89	123.378	
17,800.00	9,237.00	9,263.95	9,237.00	140.53	33.17	-90.00	-227.45	-486.30	8,721.61	8,651.64	69.96	124.661	
17,900.00	9,237.00	9,263.95	9,237.00	142.03	33.17	-90.00	-227.45	-486.30	8,820.83	8,750.60	70.04	125.938	
18,000.00	9,237.00	9,263.95	9,237.00	143.53	33.17	-90.00	-227.45	-486.30	8,919.43	8,849.31	70.12	127.208	
18,100.00	9,237.00	9,263.95	9,237.00	145.03	33.17	-90.00	-227.45	-486.30	9,017.97	8,947.78	70.19	128.470	
18,177.52	9,237.00	9,263.95	9,237.00	146.19	33.17	-90.00	-227.45	-486.30	9,094.17	9,023.92	70.26	129.444	
18,200.00	9,237.00	9,263.95	9,237.00	146.53	33.17	-90.00	-227.45	-486.30	9,116.25	9,045.98	70.27	129.726	
18,300.00	9,237.00	9,263.95	9,237.00	148.03	33.17	-90.00	-227.45	-486.30	9,214.47	9,144.11	70.35	130.975	
18,400.00	9,237.00	9,263.95	9,237.00	149.53	33.17	-90.00	-227.45	-486.30	9,312.72	9,242.29	70.43	132.221	
18,500.00	9,237.00	9,263.95	9,237.00	151.02	33.17	-90.00	-227.45	-486.30	9,411.01	9,340.50	70.51	133.464	
18,600.00	9,237.00	9,263.95	9,237.00	152.52	33.17	-90.00	-227.45	-486.30	9,509.34	9,438.75	70.60	134.702	
18,700.00	9,237.00	9,263.95	9,237.00	154.03	33.17	-90.00	-227.45	-486.30	9,607.70	9,537.03	70.68	135.937	
18,800.00	9,237.00	9,263.95	9,237.00	155.53	33.17	-90.00	-227.45	-486.30	9,706.10	9,635.34	70.76	137.169	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Beagle 35-34-22-27 Fee Pad - Beagle 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH													Offset Well Error:	0.00 usft
Survey Program: 0-MWD+HRGM														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
18,900.00	9,237.00	9,263.95	9,237.00	157.03	33.17	-90.00	-227.45	-486.30	9,804.53	9,733.68	70.84	138.396		
19,000.00	9,237.00	9,263.95	9,237.00	158.53	33.17	-90.00	-227.45	-486.30	9,902.99	9,832.06	70.93	139.620		

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Collie 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+HRGM+MS													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
8,600.00	8,386.52	8,600.00	8,386.52	0.00	0.00	0.00	1,255.75	-452.65	0.00	0.00	0.00	0.000 Level 1	
8,700.00	8,486.52	8,700.00	8,486.52	0.00	0.33	0.00	1,255.75	-452.65	0.00	0.00	0.00	0.000 Level 1	
8,800.00	8,586.52	8,800.00	8,586.52	0.01	0.67	0.00	1,255.75	-452.65	0.00	0.00	0.00	0.000 Level 1	
8,877.52	8,664.04	8,877.52	8,664.04	0.02	0.93	0.00	1,255.75	-452.65	0.00	0.00	0.00	0.000 Level 1, CC, SF	
8,880.00	8,666.52	8,880.00	8,666.52	0.02	0.94	180.00	1,255.75	-452.65	0.01	-0.89	0.90	0.006 Level 1, ES	
8,900.00	8,686.52	8,899.99	8,686.52	0.02	1.00	180.00	1,255.75	-452.65	0.44	-0.52	0.96	0.459 Level 1	
8,950.00	8,736.33	8,949.81	8,736.33	0.06	1.17	180.00	1,255.75	-452.65	4.58	3.45	1.12	4.071	
9,000.00	8,785.59	8,999.07	8,785.59	0.14	1.34	180.00	1,255.75	-452.65	13.04	11.75	1.29	10.112	
9,050.00	8,833.93	9,047.41	8,833.93	0.27	1.50	180.00	1,255.75	-452.65	25.77	24.31	1.45	17.716	
9,100.00	8,880.97	9,094.45	8,880.97	0.44	1.66	180.00	1,255.75	-452.65	42.66	41.04	1.62	26.378	
9,150.00	8,926.37	9,139.84	8,926.37	0.65	1.81	180.00	1,255.75	-452.65	63.58	61.80	1.78	35.783	
9,200.00	8,969.76	9,183.24	8,969.76	0.89	1.96	180.00	1,255.75	-452.65	88.38	86.45	1.93	45.741	
9,250.00	9,010.83	9,224.31	9,010.83	1.16	2.10	180.00	1,255.75	-452.65	116.87	114.79	2.08	56.132	
9,300.00	9,049.27	9,262.74	9,049.27	1.46	2.23	180.00	1,255.75	-452.65	148.83	146.61	2.23	66.891	
9,350.00	9,084.76	9,298.24	9,084.76	1.78	2.34	180.00	1,255.75	-452.65	184.02	181.66	2.36	77.990	
9,400.00	9,117.06	9,330.54	9,117.06	2.11	2.45	180.00	1,255.75	-452.65	222.17	219.69	2.48	89.420	
9,450.00	9,145.91	9,359.39	9,145.91	2.47	2.55	180.00	1,255.75	-452.65	262.99	260.39	2.60	101.211	
9,500.00	9,171.09	9,384.57	9,171.09	2.83	2.64	180.00	1,255.75	-452.65	306.17	303.47	2.70	113.405	
9,550.00	9,192.42	9,405.89	9,192.42	3.21	2.71	180.00	1,255.75	-452.65	351.37	348.59	2.79	126.061	
9,600.00	9,209.72	9,423.19	9,209.72	3.59	2.77	180.00	1,255.75	-452.65	398.27	395.41	2.86	139.250	
9,650.00	9,222.87	9,436.34	9,222.87	3.98	2.81	180.00	1,255.75	-452.65	446.49	443.57	2.92	153.070	
9,700.00	9,231.76	9,445.24	9,231.76	4.37	2.84	180.00	1,255.75	-452.65	495.68	492.72	2.96	167.625	
9,750.00	9,236.34	9,449.81	9,236.34	4.76	2.86	180.00	1,255.75	-452.65	545.45	542.47	2.98	183.031	
9,777.52	9,237.00	9,450.47	9,237.00	4.98	2.86	0.00	1,255.75	-452.65	572.96	569.97	2.99	191.907	
9,800.00	9,237.00	9,450.47	9,237.00	5.15	2.86	0.00	1,255.75	-452.65	595.44	592.45	2.99	199.303	
9,900.00	9,237.00	9,450.47	9,237.00	5.93	2.86	0.00	1,255.75	-452.65	695.44	692.44	3.00	232.061	
10,000.00	9,237.00	9,450.47	9,237.00	6.72	2.86	0.00	1,255.75	-452.65	795.44	792.43	3.01	264.535	
10,100.00	9,237.00	9,450.47	9,237.00	7.50	2.86	0.00	1,255.75	-452.65	895.44	892.42	3.02	296.698	
10,200.00	9,237.00	9,450.47	9,237.00	8.30	2.86	0.00	1,255.75	-452.65	995.44	992.41	3.03	328.523	
10,300.00	9,237.00	9,450.47	9,237.00	9.11	2.86	0.00	1,255.75	-452.65	1,095.44	1,092.40	3.04	359.984	
10,400.00	9,237.00	9,450.47	9,237.00	9.94	2.86	0.00	1,255.75	-452.65	1,195.44	1,192.38	3.06	391.059	
10,500.00	9,237.00	9,450.47	9,237.00	10.80	2.86	0.00	1,255.75	-452.65	1,295.44	1,292.37	3.07	421.722	
10,600.00	9,237.00	9,450.47	9,237.00	11.67	2.86	0.00	1,255.75	-452.65	1,395.44	1,392.35	3.09	451.952	
10,700.00	9,237.00	9,450.47	9,237.00	12.58	2.86	0.00	1,255.75	-452.65	1,495.44	1,492.34	3.10	481.729	
10,800.00	9,237.00	9,450.47	9,237.00	13.50	2.86	0.00	1,255.75	-452.65	1,595.44	1,592.32	3.12	511.033	
10,900.00	9,237.00	9,450.47	9,237.00	14.46	2.86	0.00	1,255.75	-452.65	1,695.44	1,692.30	3.14	539.847	
11,000.00	9,237.00	9,450.47	9,237.00	15.44	2.86	0.00	1,255.75	-452.65	1,795.44	1,792.28	3.16	568.153	
11,100.00	9,237.00	9,450.47	9,237.00	16.45	2.86	0.00	1,255.75	-452.65	1,895.44	1,892.26	3.18	595.936	
11,200.00	9,237.00	9,450.47	9,237.00	17.48	2.86	0.00	1,255.75	-452.65	1,995.44	1,992.24	3.20	623.182	
11,300.00	9,237.00	9,450.48	9,237.00	18.54	2.86	0.00	1,255.75	-452.65	2,095.44	2,092.22	3.22	649.879	
11,400.00	9,237.00	9,450.48	9,237.00	19.63	2.86	0.00	1,255.75	-452.65	2,195.44	2,192.19	3.25	676.015	
11,500.00	9,237.00	9,450.48	9,237.00	20.74	2.86	0.00	1,255.75	-452.65	2,295.44	2,292.17	3.27	701.582	
11,600.00	9,237.00	9,450.48	9,237.00	21.87	2.86	0.00	1,255.75	-452.65	2,395.44	2,392.14	3.30	726.569	
11,700.00	9,237.00	9,450.48	9,237.00	23.02	2.86	0.00	1,255.75	-452.65	2,495.44	2,492.12	3.32	750.970	
11,800.00	9,237.00	9,450.48	9,237.00	24.19	2.86	0.00	1,255.75	-452.65	2,595.44	2,592.09	3.35	774.779	
11,900.00	9,237.00	9,450.48	9,237.00	25.38	2.86	0.00	1,255.75	-452.65	2,695.44	2,692.06	3.38	797.991	
12,000.00	9,237.00	9,450.48	9,237.00	26.59	2.86	0.00	1,255.75	-452.65	2,795.44	2,792.03	3.41	820.602	
12,100.00	9,237.00	9,450.48	9,237.00	27.82	2.86	0.00	1,255.75	-452.65	2,895.44	2,892.00	3.44	842.611	
12,200.00	9,237.00	9,450.48	9,237.00	29.06	2.86	0.00	1,255.75	-452.65	2,995.44	2,991.97	3.47	864.015	
12,300.00	9,237.00	9,450.48	9,237.00	30.32	2.86	0.00	1,255.75	-452.65	3,095.44	3,091.94	3.50	884.815	
12,400.00	9,237.00	9,450.48	9,237.00	31.59	2.86	0.00	1,255.75	-452.65	3,195.44	3,191.91	3.53	905.011	
12,500.00	9,237.00	9,450.48	9,237.00	32.88	2.86	0.00	1,255.75	-452.65	3,295.44	3,291.88	3.56	924.605	

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

Scientific Drilling, Intl

Anticollision Report

Company:	WPX Energy	Local Co-ordinate Reference:	Well Collie 35-34-22-27 Fee 401H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	GL 3079 + KB 26 = @ 3105.00usft (HP 265)
Reference Site:	Collie 35-34-22-27 Fee Pad	MD Reference:	GL 3079 + KB 26 = @ 3105.00usft (HP 265)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Collie 35-34-22-27 Fee 401H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	Midland District
Reference Design:	Plan #2 ST01	Offset TVD Reference:	Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Collie 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HRGM+MS												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
12,600.00	9,237.00	9,450.48	9,237.00	34.17	2.86	0.00	1,255.75	-452.65	3,395.44	3,391.84	3.60	943.600	
12,700.00	9,237.00	9,450.48	9,237.00	35.48	2.86	0.00	1,255.75	-452.65	3,495.44	3,491.81	3.63	961.999	
12,800.00	9,237.00	9,450.48	9,237.00	36.80	2.86	0.00	1,255.75	-452.65	3,595.44	3,591.77	3.67	979.807	
12,900.00	9,237.00	9,450.48	9,237.00	38.13	2.86	0.00	1,255.75	-452.65	3,695.44	3,691.73	3.71	997.028	
13,000.00	9,237.00	9,450.48	9,237.00	39.47	2.86	0.00	1,255.75	-452.65	3,795.44	3,791.70	3.74	1,013.669	
13,100.00	9,237.00	9,450.48	9,237.00	40.82	2.86	0.00	1,255.75	-452.65	3,895.44	3,891.66	3.78	1,029.736	
13,200.00	9,237.00	9,450.48	9,237.00	42.17	2.86	0.00	1,255.75	-452.65	3,995.44	3,991.62	3.82	1,045.235	
13,300.00	9,237.00	9,450.48	9,237.00	43.54	2.86	0.00	1,255.75	-452.65	4,095.44	4,091.58	3.86	1,060.176	
13,400.00	9,237.00	9,450.48	9,237.00	44.91	2.86	0.00	1,255.75	-452.65	4,195.44	4,191.54	3.90	1,074.565	
13,500.00	9,237.00	9,450.48	9,237.00	46.29	2.86	0.00	1,255.75	-452.65	4,295.44	4,291.49	3.95	1,088.411	
13,600.00	9,237.00	9,450.48	9,237.00	47.67	2.86	0.00	1,255.75	-452.65	4,395.44	4,391.45	3.99	1,101.723	
13,700.00	9,237.00	9,450.48	9,237.00	49.06	2.86	0.00	1,255.75	-452.65	4,495.44	4,491.41	4.03	1,114.512	
13,800.00	9,237.00	9,450.48	9,237.00	50.46	2.86	0.00	1,255.75	-452.65	4,595.44	4,591.36	4.08	1,126.785	
13,900.00	9,237.00	9,450.48	9,237.00	51.86	2.86	0.00	1,255.75	-452.65	4,695.44	4,691.32	4.12	1,138.554	
14,000.00	9,237.00	9,450.48	9,237.00	53.27	2.86	0.00	1,255.75	-452.65	4,795.44	4,791.27	4.17	1,149.828	
14,100.00	9,237.00	9,450.48	9,237.00	54.68	2.86	0.00	1,255.75	-452.65	4,895.44	4,891.22	4.22	1,160.618	
14,200.00	9,237.00	9,450.48	9,237.00	56.10	2.86	0.00	1,255.75	-452.65	4,995.44	4,991.18	4.27	1,170.935	
14,300.00	9,237.00	9,450.48	9,237.00	57.52	2.86	0.00	1,255.75	-452.65	5,095.44	5,091.13	4.32	1,180.789	
14,400.00	9,237.00	9,450.48	9,237.00	58.95	2.86	0.00	1,255.75	-452.65	5,195.44	5,191.08	4.37	1,190.191	
14,500.00	9,237.00	9,450.48	9,237.00	60.38	2.86	0.00	1,255.75	-452.65	5,295.44	5,291.03	4.42	1,199.152	
14,600.00	9,237.00	9,450.48	9,237.00	61.81	2.86	0.00	1,255.75	-452.65	5,395.44	5,390.97	4.47	1,207.683	
14,700.00	9,237.00	9,450.48	9,237.00	63.25	2.86	0.00	1,255.75	-452.65	5,495.44	5,490.92	4.52	1,215.795	
14,800.00	9,237.00	9,450.48	9,237.00	64.69	2.86	0.00	1,255.75	-452.65	5,595.44	5,590.87	4.57	1,223.499	
14,900.00	9,237.00	9,450.48	9,237.00	66.14	2.86	0.00	1,255.75	-452.65	5,695.44	5,690.81	4.63	1,230.806	
14,927.52	9,237.00	9,450.48	9,237.00	66.53	2.86	0.00	1,255.75	-452.65	5,722.96	5,718.32	4.64	1,232.748	
15,000.00	9,237.00	9,450.48	9,237.00	67.58	2.86	90.00	1,255.75	-452.65	5,795.44	5,790.78	4.66	1,243.577	
15,100.00	9,237.00	9,450.48	9,237.00	69.04	2.86	90.00	1,255.75	-452.65	5,895.42	5,890.80	4.61	1,277.984	
15,200.00	9,237.00	9,450.48	9,237.00	70.50	2.86	90.00	1,255.75	-452.65	5,995.34	5,990.87	4.47	1,339.959	
15,300.00	9,237.00	9,450.48	9,237.00	71.97	2.86	90.00	1,255.75	-452.65	6,095.19	6,090.97	4.22	1,445.541	
15,400.00	9,237.00	9,450.48	9,237.00	73.44	2.86	90.00	1,255.75	-452.65	6,194.94	6,191.18	3.75	1,650.932	
15,427.52	9,237.00	9,450.48	9,237.00	73.84	2.86	90.00	1,255.75	-452.65	6,222.36	6,218.81	3.55	1,753.861	
15,500.00	9,237.00	9,450.48	9,237.00	74.91	2.86	90.00	1,255.75	-452.65	6,294.59	6,291.34	3.25	1,933.867	
15,600.00	9,237.00	9,450.48	9,237.00	76.39	2.86	90.00	1,255.75	-452.65	6,394.26	6,390.22	4.04	1,582.749	
15,700.00	9,237.00	9,450.48	9,237.00	77.86	2.86	90.00	1,255.75	-452.65	6,493.93	6,489.41	4.52	1,436.286	
15,800.00	9,237.00	9,450.48	9,237.00	79.34	2.86	90.00	1,255.75	-452.65	6,593.61	6,588.71	4.91	1,344.206	
15,900.00	9,237.00	9,450.48	9,237.00	80.82	2.86	90.00	1,255.75	-452.65	6,693.31	6,688.07	5.24	1,278.408	
16,000.00	9,237.00	9,450.48	9,237.00	82.31	2.86	90.00	1,255.75	-452.65	6,793.01	6,787.48	5.53	1,228.143	
16,100.00	9,237.00	9,450.48	9,237.00	83.79	2.86	90.00	1,255.75	-452.65	6,892.72	6,886.92	5.80	1,188.118	
16,200.00	9,237.00	9,450.48	9,237.00	85.28	2.86	90.00	1,255.75	-452.65	6,992.44	6,986.38	6.05	1,155.328	
16,300.00	9,237.00	9,450.48	9,237.00	86.76	2.86	90.00	1,255.75	-452.65	7,092.16	7,085.87	6.29	1,127.907	
16,400.00	9,237.00	9,450.48	9,237.00	88.25	2.86	90.00	1,255.75	-452.65	7,191.90	7,185.39	6.51	1,104.616	
16,500.00	9,237.00	9,450.48	9,237.00	89.74	2.86	90.00	1,255.75	-452.65	7,291.64	7,284.91	6.72	1,084.593	
16,600.00	9,237.00	9,450.48	9,237.00	91.24	2.86	90.00	1,255.75	-452.65	7,391.39	7,384.46	6.93	1,067.214	
16,700.00	9,237.00	9,450.48	9,237.00	92.73	2.86	90.00	1,255.75	-452.65	7,491.14	7,484.02	7.12	1,052.014	
16,800.00	9,237.00	9,450.48	9,237.00	94.22	2.86	90.00	1,255.75	-452.65	7,590.90	7,583.59	7.31	1,038.638	
16,900.00	9,237.00	9,450.48	9,237.00	95.72	2.86	90.00	1,255.75	-452.65	7,690.67	7,683.18	7.49	1,026.809	
17,000.00	9,237.00	9,450.48	9,237.00	97.21	2.86	90.00	1,255.75	-452.65	7,790.44	7,782.78	7.67	1,016.306	
17,100.00	9,237.00	9,450.48	9,237.00	98.71	2.86	90.00	1,255.75	-452.65	7,890.22	7,882.39	7.84	1,006.952	
17,200.00	9,237.00	9,450.48	9,237.00	100.21	2.86	90.00	1,255.75	-452.65	7,990.01	7,982.01	8.00	998.601	
17,300.00	9,237.00	9,450.48	9,237.00	101.71	2.86	90.00	1,255.75	-452.65	8,089.80	8,081.64	8.16	991.135	
17,400.00	9,237.00	9,450.48	9,237.00	103.21	2.86	90.00	1,255.75	-452.65	8,189.59	8,181.27	8.32	984.452	
17,500.00	9,237.00	9,450.48	9,237.00	104.71	2.86	90.00	1,255.75	-452.65	8,289.39	8,280.92	8.47	978.468	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Collie 35-34-22-27 Fee 401H - Wellbore #1 - Plan #1 PH												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HRGM+MS												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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
17,600.00	9,237.00	9,450.48	9,237.00	106.22	2.86	90.00	1,255.75	-452.65	8,389.20	8,380.58	8.62	973.111	
17,677.52	9,237.00	9,450.48	9,237.00	107.38	2.86	90.00	1,255.75	-452.65	8,466.57	8,457.83	8.73	969.353	
17,700.00	9,237.00	9,450.48	9,237.00	107.72	2.86	90.00	1,255.75	-452.65	8,489.01	8,480.24	8.77	968.430	
17,800.00	9,237.00	9,450.48	9,237.00	109.22	2.86	90.00	1,255.75	-452.65	8,588.89	8,580.01	8.88	967.168	
17,900.00	9,237.00	9,450.48	9,237.00	110.73	2.86	90.00	1,255.75	-452.65	8,688.84	8,679.89	8.95	970.326	
18,000.00	9,237.00	9,450.48	9,237.00	112.23	2.86	90.00	1,255.75	-452.65	8,788.83	8,779.85	8.99	977.766	
18,100.00	9,237.00	9,450.48	9,237.00	113.73	2.86	-90.00	1,255.75	-452.65	8,888.83	8,879.85	8.98	989.514	
18,177.52	9,237.00	9,450.48	9,237.00	114.89	2.86	-90.00	1,255.75	-452.65	8,968.33	8,957.38	8.95	1,001.698	
18,200.00	9,237.00	9,450.48	9,237.00	115.22	2.86	-90.00	1,255.75	-452.65	8,988.81	8,979.87	8.94	1,005.645	
18,300.00	9,237.00	9,450.48	9,237.00	116.72	2.86	-90.00	1,255.75	-452.65	9,088.77	9,079.89	8.88	1,023.556	
18,400.00	9,237.00	9,450.48	9,237.00	118.22	2.86	-90.00	1,255.75	-452.65	9,188.74	9,179.92	8.82	1,041.974	
18,500.00	9,237.00	9,450.48	9,237.00	119.72	2.86	-90.00	1,255.75	-452.65	9,288.70	9,279.95	8.76	1,060.935	
18,600.00	9,237.00	9,450.48	9,237.00	121.22	2.86	-90.00	1,255.75	-452.65	9,388.67	9,379.98	8.69	1,080.476	
18,700.00	9,237.00	9,450.48	9,237.00	122.72	2.86	-90.00	1,255.75	-452.65	9,488.64	9,480.02	8.62	1,100.642	
18,800.00	9,237.00	9,450.48	9,237.00	124.22	2.86	-90.00	1,255.75	-452.65	9,588.61	9,580.06	8.55	1,121.479	
18,900.00	9,237.00	9,450.48	9,237.00	125.72	2.86	-90.00	1,255.75	-452.65	9,688.58	9,680.10	8.48	1,143.040	
19,000.00	9,237.00	9,450.48	9,237.00	127.22	2.86	-90.00	1,255.75	-452.65	9,788.55	9,780.15	8.40	1,165.383	
19,100.00	9,237.00	9,450.48	9,237.00	128.73	2.86	-90.00	1,255.75	-452.65	9,888.52	9,880.20	8.32	1,188.573	
19,200.00	9,237.00	9,450.48	9,237.00	130.23	2.86	-90.00	1,255.75	-452.65	9,988.49	9,980.25	8.24	1,212.684	

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Helper Fee #1 - Wellbore #1 - As Drilled													Offset Site Error: 0.00 usft
Survey Program: 190-ADK 105													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	-78.54	1,799.25	-8,872.76	9,053.35				
100.00	100.00	92.27	92.27	0.13	0.11	-78.53	1,799.60	-8,872.76	9,053.43	9,053.20	0.23	N/A	
200.00	200.00	190.00	189.99	0.49	0.23	-78.53	1,800.74	-8,872.76	9,053.66	9,052.97	0.69	N/A	
300.00	300.00	283.64	283.62	0.85	0.45	-78.52	1,802.06	-8,872.76	9,053.94	9,052.69	1.25	7,258.971	
400.00	400.00	571.11	571.06	1.21	1.03	-78.53	1,800.62	-8,871.02	9,053.43	9,051.21	2.21	4,091.894	
500.00	500.00	672.00	671.91	1.57	1.22	-78.54	1,798.39	-8,869.31	9,051.32	9,048.53	2.79	3,248.919	
600.00	600.00	757.97	757.84	1.92	1.40	-78.55	1,796.32	-8,867.94	9,049.32	9,045.99	3.33	2,718.200	
700.00	700.00	815.11	814.95	2.28	1.53	-78.56	1,794.74	-8,867.42	9,047.88	9,044.07	3.81	2,375.313	
800.00	800.00	862.00	861.82	2.64	1.63	-78.57	1,793.33	-8,867.23	9,046.93	9,042.66	4.27	2,119.446	
900.00	900.00	946.73	946.51	3.00	1.81	-78.58	1,790.58	-8,867.24	9,046.31	9,041.51	4.80	1,882.974	
1,000.00	1,000.00	1,018.57	1,018.31	3.36	1.96	-78.60	1,788.12	-8,867.52	9,046.02	9,040.70	5.31	1,702.559	
1,100.00	1,100.00	1,164.26	1,163.93	3.72	2.29	-78.63	1,783.86	-8,867.98	9,045.81	9,039.83	5.98	1,512.116	
1,200.00	1,200.00	1,367.70	1,367.34	4.08	2.75	-78.64	1,781.45	-8,865.95	9,044.60	9,037.81	6.79	1,332.564	
1,300.00	1,300.00	1,616.00	1,615.52	4.43	3.32	-78.66	1,777.22	-8,859.70	9,041.50	9,033.79	7.70	1,173.719	
1,400.00	1,400.00	1,685.79	1,685.25	4.79	3.48	-78.66	1,775.54	-8,857.51	9,038.03	9,029.81	8.22	1,099.998	
1,500.00	1,500.00	1,766.00	1,765.40	5.15	3.68	-78.68	1,772.78	-8,855.97	9,035.39	9,026.64	8.75	1,032.271	
1,600.00	1,600.00	1,803.14	1,802.51	5.51	3.75	-78.69	1,771.27	-8,855.48	9,033.03	9,023.84	9.19	982.670	
1,700.00	1,700.00	1,895.00	1,894.27	5.87	3.96	-78.71	1,767.25	-8,854.06	9,030.67	9,020.92	9.75	926.259	
1,800.00	1,800.00	1,895.00	1,894.27	6.23	3.96	-78.71	1,767.25	-8,854.06	9,029.14	9,019.03	10.11	893.205	
1,888.27	1,888.27	1,895.00	1,894.27	6.54	3.96	-78.71	1,767.25	-8,854.06	9,028.71	9,018.29	10.43	866.060	
1,900.00	1,900.00	1,895.00	1,894.27	6.59	3.96	-78.71	1,767.25	-8,854.06	9,028.72	9,018.25	10.47	862.587	
1,968.70	1,968.70	1,967.02	1,966.23	6.83	4.11	-78.73	1,764.27	-8,853.75	9,027.82	9,016.96	10.86	831.458	
2,000.00	2,000.00	1,974.22	1,973.42	6.94	4.13	-78.73	1,764.01	-8,853.82	9,027.89	9,016.91	10.98	821.894	
2,100.00	2,100.00	1,997.24	1,996.42	7.30	4.18	-78.74	1,763.21	-8,854.16	9,028.68	9,017.29	11.39	792.840	
2,200.00	2,200.00	2,082.00	2,081.10	7.66	4.36	-78.76	1,760.82	-8,857.04	9,031.24	9,019.32	11.92	757.921	
2,300.00	2,300.00	2,082.00	2,081.10	8.02	4.36	-78.78	1,760.82	-8,857.04	9,033.17	9,020.90	12.27	736.127	
2,400.00	2,400.00	2,082.00	2,081.10	8.38	4.36	-78.76	1,760.82	-8,857.04	9,036.22	9,023.59	12.63	715.729	
2,500.00	2,500.00	2,082.00	2,081.10	8.74	4.36	-78.76	1,760.82	-8,857.04	9,040.36	9,027.39	12.98	696.613	
2,600.00	2,600.00	2,082.00	2,081.10	9.09	4.36	-78.76	1,760.82	-8,857.04	9,045.62	9,032.29	13.33	678.678	
2,700.00	2,700.00	2,082.00	2,081.10	9.45	4.36	-78.76	1,760.82	-8,857.04	9,051.97	9,038.29	13.68	661.833	
2,800.00	2,799.98	2,082.00	2,081.10	9.81	4.36	-58.82	1,760.82	-8,857.04	9,058.52	9,044.50	14.02	645.988	
2,900.00	2,899.84	2,168.47	2,167.32	10.17	4.53	-58.78	1,758.31	-8,883.04	9,062.32	9,047.78	14.54	623.311	
3,000.00	2,999.45	2,168.35	2,167.09	10.53	4.57	-58.72	1,757.59	-8,864.92	9,066.40	9,051.48	14.92	607.659	
3,100.00	3,098.70	2,270.00	2,268.09	10.88	4.73	-58.76	1,754.07	-8,874.60	9,070.62	9,055.19	15.43	588.001	
3,200.00	3,197.47	2,270.00	2,268.09	11.24	4.73	-58.73	1,754.07	-8,874.60	9,072.29	9,056.52	15.77	575.435	
3,300.00	3,295.62	2,270.00	2,268.09	11.60	4.73	-58.72	1,754.07	-8,874.60	9,073.25	9,057.15	16.11	563.337	
3,400.00	3,393.06	2,270.00	2,268.09	11.97	4.73	-58.71	1,754.07	-8,874.60	9,073.51	9,057.06	16.45	551.632	
3,500.00	3,489.64	2,270.00	2,268.09	12.34	4.73	-58.72	1,754.07	-8,874.60	9,073.05	9,056.25	16.79	540.244	
3,600.00	3,585.27	2,270.00	2,268.09	12.72	4.73	-58.74	1,754.07	-8,874.60	9,071.88	9,054.74	17.15	529.108	
3,692.53	3,672.79	2,270.00	2,268.09	13.09	4.73	-58.77	1,754.07	-8,874.60	9,070.17	9,052.69	17.48	518.976	
3,700.00	3,679.82	2,270.00	2,268.09	13.12	4.73	-58.77	1,754.07	-8,874.60	9,070.01	9,052.50	17.50	518.164	
3,800.00	3,773.88	2,270.00	2,268.09	13.52	4.73	-58.77	1,754.07	-8,874.60	9,068.46	9,050.59	17.87	507.454	
3,890.08	3,858.60	2,270.00	2,268.09	13.90	4.73	-58.77	1,754.07	-8,874.60	9,068.02	9,049.81	18.21	498.056	
3,900.00	3,867.94	2,270.00	2,268.09	13.94	4.73	-58.77	1,754.07	-8,874.60	9,068.02	9,049.78	18.24	497.047	
3,966.62	3,930.60	2,349.50	2,346.35	14.22	4.90	-58.96	1,749.14	-8,887.62	9,066.08	9,047.41	18.68	485.458	
4,000.00	3,961.99	2,354.24	2,350.98	14.36	4.91	-58.97	1,748.78	-8,888.52	9,066.15	9,047.34	18.81	481.914	
4,100.00	4,056.05	2,368.37	2,364.79	14.80	4.93	-59.01	1,747.66	-8,891.31	9,066.98	9,047.75	19.23	471.485	
4,200.00	4,150.11	2,458.00	2,451.56	15.24	5.12	-59.25	1,739.05	-8,912.01	9,070.83	9,051.00	19.83	457.518	
4,300.00	4,244.17	2,458.00	2,451.56	15.69	5.12	-59.25	1,739.05	-8,912.01	9,072.90	9,052.68	20.22	448.657	
4,400.00	4,338.23	3,137.44	3,104.06	16.14	6.78	-61.41	1,604.38	-9,040.41	9,069.40	9,047.03	22.37	405.502	
4,500.00	4,432.28	3,212.00	3,175.38	16.60	6.97	-61.66	1,586.78	-9,053.11	9,067.17	9,044.18	22.99	394.441	
4,600.00	4,526.34	3,233.24	3,195.67	17.07	7.03	-61.74	1,581.69	-9,056.82	9,065.39	9,041.92	23.47	386.244	

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

Scientific Drilling, Intl

Anticollision Report

Company:	WPX Energy	Local Co-ordinate Reference:	Well Collie 35-34-22-27 Fee 401H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	GL 3079 + KB 26 = @ 3105.00usft (HP 265)
Reference Site:	Collie 35-34-22-27 Fee Pad	MD Reference:	GL 3079 + KB 26 = @ 3105.00usft (HP 265)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Collie 35-34-22-27 Fee 401H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	Midland District
Reference Design:	Plan #2 ST01	Offset TVD Reference:	Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Helper Fee #1 - Wellbore #1 - As Drilled														Offset Site Error:	0.00 usft
Survey Program: 190-ADK 105														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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,700.00	4,620.40	3,399.11	3,354.64	17.54	7.48	-62.29	1,543.53	-9,084.81	9,063.75	9,039.39	24.37	371.994			
4,800.00	4,714.46	3,480.93	3,433.36	18.01	7.70	-62.56	1,525.67	-9,098.19	9,062.05	9,037.02	25.03	362.038			
4,900.00	4,808.52	3,563.02	3,512.48	18.49	7.93	-62.83	1,508.34	-9,111.60	9,060.68	9,034.98	25.70	352.542			
5,000.00	4,902.57	3,588.00	3,536.57	18.98	8.00	-62.91	1,503.19	-9,115.67	9,059.83	9,033.61	26.21	345.642			
5,030.81	4,931.55	3,588.00	3,536.57	19.13	8.00	-62.91	1,503.19	-9,115.67	9,059.77	9,033.43	26.35	343.857			
5,100.00	4,996.63	3,588.00	3,536.57	19.46	8.00	-62.91	1,503.19	-9,115.67	9,060.04	9,033.39	26.65	339.942			
5,200.00	5,090.69	3,657.37	3,603.31	19.96	8.20	-63.14	1,488.51	-9,127.84	9,060.46	9,033.16	27.30	331.881			
5,300.00	5,184.75	5,203.26	5,118.74	20.45	11.94	-67.42	1,285.96	-9,272.04	9,050.25	9,018.71	31.54	286.985			
5,400.00	5,278.81	5,291.62	5,207.09	20.85	12.11	-67.60	1,284.95	-9,272.83	9,037.42	9,005.23	32.19	280.752			
5,500.00	5,372.87	5,389.81	5,285.28	21.44	12.25	-67.76	1,284.10	-9,273.63	9,024.83	8,992.00	32.83	274.889			
5,600.00	5,466.92	5,448.02	5,363.47	21.85	12.40	-67.93	1,283.22	-9,274.56	9,012.52	8,979.04	33.47	269.232			
5,700.00	5,560.98	5,542.20	5,457.64	22.45	12.58	-68.12	1,282.27	-9,275.78	9,000.41	8,966.26	34.15	263.521			
5,800.00	5,655.04	5,640.73	5,556.16	22.96	12.76	-68.33	1,281.70	-9,276.98	8,988.39	8,953.54	34.85	257.949			
5,900.00	5,749.10	5,731.31	5,706.73	23.46	13.03	-68.63	1,282.76	-9,278.25	8,976.18	8,940.55	35.63	251.908			
6,000.00	5,843.16	5,916.12	5,831.50	23.97	13.25	-68.86	1,285.67	-9,278.52	8,963.54	8,927.17	36.37	246.459			
6,100.00	5,937.21	6,027.22	5,942.59	24.49	13.45	-69.08	1,287.75	-9,278.55	8,950.80	8,913.72	37.08	241.385			
6,200.00	6,031.27	6,177.36	6,092.72	25.00	13.73	-69.38	1,288.54	-9,278.06	8,937.77	8,899.92	37.86	236.093			
6,300.00	6,125.33	6,315.75	6,231.09	25.52	14.02	-69.68	1,286.61	-9,276.91	8,924.32	8,885.71	38.61	231.121			
6,400.00	6,219.39	6,402.00	6,317.30	26.03	14.19	-69.87	1,284.14	-9,275.90	8,910.65	8,871.37	39.28	226.824			
6,500.00	6,313.45	6,485.27	6,400.53	26.55	14.37	-70.06	1,281.57	-9,275.01	8,897.21	8,857.25	39.96	222.675			
6,600.00	6,407.51	6,547.07	6,462.30	27.07	14.50	-70.20	1,280.02	-9,274.59	8,884.27	8,843.67	40.59	218.863			
6,620.95	6,427.21	6,590.00	6,505.22	27.18	14.59	-70.29	1,279.13	-9,274.43	8,881.69	8,840.91	40.78	217.808			
6,700.00	6,501.92	6,590.00	6,505.22	27.58	14.59	-70.11	1,279.13	-9,274.43	8,872.18	8,830.98	41.19	215.384			
6,800.00	6,597.41	6,656.84	6,572.05	28.08	14.72	-70.04	1,277.89	-9,274.47	8,861.73	8,819.91	41.82	211.900			
6,900.00	6,693.88	6,708.62	6,623.82	28.55	14.83	-69.97	1,276.97	-9,274.79	8,853.06	8,810.65	42.40	208.790			
7,000.00	6,791.20	6,780.00	6,695.19	29.00	14.97	-69.94	1,275.77	-9,275.67	8,846.17	8,803.17	43.00	205.733			
7,100.00	6,889.27	6,858.24	6,773.41	29.43	15.13	-69.94	1,274.27	-9,276.82	8,840.79	8,797.20	43.59	202.819			
7,200.00	6,987.96	6,999.96	6,915.07	29.84	15.42	-70.02	1,270.60	-9,278.55	8,836.45	8,792.18	44.28	199.570			
7,300.00	7,087.15	7,221.31	7,136.38	30.22	15.89	-70.14	1,267.39	-9,278.81	8,832.11	8,787.04	45.07	195.952			
7,400.00	7,186.72	7,343.00	7,258.07	30.58	16.16	-70.14	1,266.19	-9,277.95	8,828.26	8,782.59	45.66	193.330			
7,500.00	7,286.55	7,428.51	7,343.58	30.91	16.34	-70.13	1,265.49	-9,277.32	8,825.58	8,779.41	46.17	191.155			
7,600.00	7,386.52	7,502.65	7,417.71	31.23	16.50	-70.12	1,265.19	-9,277.00	8,824.40	8,777.76	46.63	189.227			
7,613.48	7,400.00	7,532.00	7,447.06	31.27	16.56	-89.94	1,265.16	-9,276.93	8,824.38	8,777.65	46.73	188.849			
7,689.97	7,476.49	7,564.88	7,479.94	31.49	16.62	-89.94	1,265.20	-9,276.91	8,824.26	8,777.23	47.03	187.616			
7,700.00	7,486.52	7,571.42	7,486.48	31.52	16.63	-89.94	1,265.22	-9,276.91	8,824.27	8,777.19	47.08	187.441			
7,800.00	7,586.52	7,636.64	7,551.70	31.82	16.76	-89.94	1,265.66	-9,277.08	8,824.53	8,777.01	47.52	185.712			
7,900.00	7,686.52	7,721.00	7,636.05	32.12	16.92	-89.93	1,266.87	-9,277.69	8,825.22	8,777.23	47.99	183.892			
8,000.00	7,786.52	7,785.94	7,700.97	32.43	17.04	-89.92	1,267.83	-9,278.34	8,826.17	8,777.73	48.44	182.217			
8,100.00	7,886.52	7,877.90	7,792.93	32.73	17.21	-89.92	1,268.33	-9,279.33	8,827.25	8,778.32	48.94	180.384			
8,200.00	7,986.52	7,991.90	7,906.92	33.03	17.42	-89.92	1,268.20	-9,280.57	8,828.35	8,778.87	49.48	178.428			
8,300.00	8,086.52	8,116.57	8,031.58	33.34	17.65	-89.91	1,269.02	-9,281.60	8,829.17	8,779.13	50.04	176.436			
8,400.00	8,186.52	8,235.04	8,150.05	33.64	17.86	-89.90	1,270.63	-9,282.29	8,829.76	8,779.16	50.59	174.533			
8,500.00	8,286.52	8,357.96	8,272.94	33.95	18.08	-89.89	1,272.79	-9,282.73	8,830.12	8,778.97	51.15	172.645			
8,600.00	8,386.52	8,475.00	8,389.97	34.11	18.29	-89.88	1,274.46	-9,282.82	8,830.19	8,778.66	51.54	171.343			
8,700.00	8,486.52	8,544.98	8,459.95	34.11	18.42	-89.87	1,275.33	-9,282.93	8,830.36	8,778.67	51.69	170.834			
8,800.00	8,586.52	8,610.14	8,525.09	34.12	18.54	-89.87	1,276.18	-9,283.30	8,830.93	8,779.09	51.84	170.354			
8,877.52	8,664.04	8,664.00	8,578.95	34.13	18.64	-89.86	1,276.90	-9,283.80	8,831.64	8,779.68	51.96	169.962			
8,900.00	8,686.52	8,835.60	8,750.53	34.13	18.97	0.15	1,279.53	-9,284.16	8,831.29	8,779.01	52.28	168.925			
8,950.00	8,736.33	8,853.00	8,767.92	34.15	19.00	0.16	1,279.82	-9,284.03	8,826.87	8,774.54	52.33	168.673			
9,000.00	8,785.59	8,916.20	8,831.12	34.17	19.13	0.17	1,280.88	-9,283.62	8,818.05	8,765.59	52.47	168.074			
9,050.00	8,833.93	8,947.61	8,862.52	34.21	19.19	0.17	1,281.37	-9,283.51	8,805.16	8,752.61	52.55	167.574			
9,100.00	8,880.97	8,978.21	8,893.12	34.26	19.25	0.18	1,281.83	-9,283.46	8,788.19	8,735.57	52.62	166.997			

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Helper Fee #1 - Wellbore #1 - As Drilled												Offset Site Error:	0.00 usft
Survey Program: 190-ADK 105												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,150.00	8,926.37	9,007.78	8,922.68	34.33	19.30	0.19	1,282.26	-9,283.46	8,767.28	8,714.57	52.70	166.349	
9,200.00	8,969.76	9,043.00	8,957.90	34.40	19.37	0.21	1,282.75	-9,283.54	8,742.57	8,689.77	52.79	165.595	
9,250.00	9,010.83	9,043.00	8,957.90	34.49	19.37	0.22	1,282.75	-9,283.54	8,714.26	8,661.43	52.82	164.971	
9,300.00	9,049.27	9,043.00	8,957.90	34.60	19.37	0.24	1,282.75	-9,283.54	8,682.64	8,629.79	52.85	164.287	
9,350.00	9,084.76	9,101.63	9,016.52	34.72	19.48	0.27	1,283.60	-9,283.88	8,647.58	8,594.59	52.99	163.194	
9,400.00	9,117.06	9,119.93	9,034.82	34.85	19.52	0.30	1,283.89	-9,284.05	8,609.73	8,556.68	53.05	162.289	
9,450.00	9,145.91	9,136.38	9,051.27	35.00	19.55	0.34	1,284.16	-9,284.23	8,569.23	8,516.12	53.11	161.350	
9,500.00	9,171.09	9,150.85	9,065.73	35.16	19.58	0.40	1,284.40	-9,284.41	8,526.37	8,473.21	53.16	160.384	
9,550.00	9,192.42	9,163.22	9,078.10	35.34	19.60	0.49	1,284.61	-9,284.58	8,481.46	8,428.25	53.21	159.401	
9,600.00	9,209.72	9,173.39	9,088.26	35.54	19.62	0.62	1,284.79	-9,284.73	8,434.82	8,381.58	53.25	158.407	
9,650.00	9,222.87	9,181.26	9,096.13	35.75	19.64	0.84	1,284.92	-9,284.85	8,386.81	8,333.53	53.28	157.413	
9,700.00	9,231.78	9,186.76	9,101.63	35.97	19.65	1.33	1,285.02	-9,284.94	8,337.77	8,284.47	53.30	156.424	
9,750.00	9,236.34	9,230.00	9,144.86	36.21	19.73	3.48	1,285.83	-9,285.73	8,288.25	8,234.86	53.39	155.231	
9,777.52	9,237.00	9,230.00	9,144.86	36.34	19.73	17.04	1,285.83	-9,285.73	8,260.76	8,207.36	53.40	154.707	
9,800.00	9,237.00	9,230.00	9,144.86	36.46	19.73	17.04	1,285.83	-9,285.73	8,238.27	8,184.88	53.40	154.281	
9,800.00	9,237.00	9,230.00	9,144.86	37.00	19.73	17.04	1,285.83	-9,285.73	8,138.28	8,084.88	53.40	152.388	
10,000.00	9,237.00	9,230.00	9,144.86	37.59	19.73	17.04	1,285.83	-9,285.73	8,038.29	7,984.88	53.41	150.493	
10,100.00	9,237.00	9,230.00	9,144.86	38.24	19.73	17.04	1,285.83	-9,285.73	7,938.30	7,884.88	53.42	148.596	
10,200.00	9,237.00	9,230.00	9,144.86	38.84	19.73	17.04	1,285.83	-9,285.73	7,838.31	7,784.88	53.43	146.698	
10,300.00	9,237.00	9,230.00	9,144.86	39.69	19.73	17.04	1,285.83	-9,285.73	7,738.32	7,684.87	53.44	144.797	
10,400.00	9,237.00	9,230.00	9,144.86	40.48	19.73	17.04	1,285.83	-9,285.73	7,638.33	7,584.87	53.45	142.895	
10,500.00	9,237.00	9,230.00	9,144.86	41.32	19.73	17.04	1,285.83	-9,285.73	7,538.33	7,484.87	53.47	140.991	
10,600.00	9,237.00	9,230.00	9,144.86	42.20	19.73	17.04	1,285.83	-9,285.73	7,438.34	7,384.86	53.48	139.086	
10,700.00	9,237.00	9,230.00	9,144.86	43.12	19.73	17.04	1,285.83	-9,285.73	7,338.35	7,284.86	53.49	137.180	
10,800.00	9,237.00	9,230.00	9,144.86	44.08	19.73	17.04	1,285.83	-9,285.73	7,238.36	7,184.85	53.51	135.272	
10,900.00	9,237.00	9,230.00	9,144.86	45.07	19.73	17.04	1,285.83	-9,285.73	7,138.37	7,084.85	53.53	133.364	
11,000.00	9,237.00	9,230.00	9,144.86	46.09	19.73	17.04	1,285.83	-9,285.73	7,038.38	6,984.84	53.54	131.454	
11,100.00	9,237.00	9,230.00	9,144.86	47.14	19.73	17.04	1,285.83	-9,285.73	6,938.39	6,884.83	53.56	129.544	
11,200.00	9,237.00	9,230.00	9,144.86	48.22	19.73	17.04	1,285.83	-9,285.73	6,838.41	6,784.83	53.58	127.632	
11,300.00	9,237.00	9,230.00	9,144.86	49.32	19.73	17.04	1,285.83	-9,285.73	6,738.42	6,684.82	53.60	125.720	
11,400.00	9,237.00	9,230.00	9,144.86	50.45	19.73	17.04	1,285.83	-9,285.73	6,638.43	6,584.81	53.62	123.808	
11,500.00	9,237.00	9,230.00	9,144.86	51.60	19.73	17.04	1,285.83	-9,285.73	6,538.44	6,484.80	53.64	121.895	
11,600.00	9,237.00	9,230.00	9,144.86	52.77	19.73	17.04	1,285.83	-9,285.73	6,438.45	6,384.79	53.66	119.981	
11,700.00	9,237.00	9,230.00	9,144.86	53.96	19.73	17.04	1,285.83	-9,285.73	6,338.47	6,284.78	53.68	118.068	
11,800.00	9,237.00	9,230.00	9,144.86	55.17	19.73	17.04	1,285.83	-9,285.73	6,238.48	6,184.77	53.71	116.154	
11,900.00	9,237.00	9,230.00	9,144.86	56.39	19.73	17.04	1,285.83	-9,285.73	6,138.49	6,084.76	53.73	114.240	
12,000.00	9,237.00	9,230.00	9,144.86	57.63	19.73	17.04	1,285.83	-9,285.73	6,038.51	5,984.75	53.76	112.326	
12,100.00	9,237.00	9,230.00	9,144.86	58.88	19.73	17.04	1,285.83	-9,285.73	5,938.52	5,884.74	53.78	110.413	
12,200.00	9,237.00	9,230.00	9,144.86	60.15	19.73	17.04	1,285.83	-9,285.73	5,838.54	5,784.73	53.81	108.499	
12,300.00	9,237.00	9,230.00	9,144.86	61.43	19.73	17.04	1,285.83	-9,285.73	5,738.55	5,684.71	53.84	106.586	
12,400.00	9,237.00	9,230.00	9,144.86	62.72	19.73	17.04	1,285.83	-9,285.73	5,638.57	5,584.70	53.87	104.674	
12,500.00	9,237.00	9,230.00	9,144.86	64.03	19.73	17.04	1,285.83	-9,285.73	5,538.59	5,484.69	53.90	102.761	
12,600.00	9,237.00	9,230.00	9,144.86	65.34	19.73	17.04	1,285.83	-9,285.73	5,438.60	5,384.68	53.93	100.850	
12,700.00	9,237.00	9,230.00	9,144.86	66.67	19.73	17.04	1,285.83	-9,285.73	5,338.62	5,284.66	53.96	98.939	
12,800.00	9,237.00	9,230.00	9,144.86	68.00	19.73	17.04	1,285.83	-9,285.73	5,238.64	5,184.65	53.99	97.029	
12,900.00	9,237.00	9,230.00	9,144.86	69.34	19.73	17.04	1,285.83	-9,285.73	5,138.66	5,084.64	54.02	95.120	
13,000.00	9,237.00	9,230.00	9,144.86	70.69	19.73	17.04	1,285.83	-9,285.73	5,038.68	4,984.63	54.06	93.213	
13,100.00	9,237.00	9,230.00	9,144.86	72.05	19.73	17.04	1,285.83	-9,285.73	4,938.70	4,884.61	54.09	91.306	
13,200.00	9,237.00	9,230.00	9,144.86	73.42	19.73	17.04	1,285.83	-9,285.73	4,838.72	4,784.60	54.12	89.400	
13,300.00	9,237.00	9,230.00	9,144.86	74.79	19.73	17.04	1,285.83	-9,285.73	4,738.75	4,684.59	54.16	87.496	
13,400.00	9,237.00	9,233.71	9,148.57	76.17	19.74	17.71	1,285.90	-9,285.80	4,638.77	4,584.57	54.20	85.583	
13,500.00	9,237.00	9,235.63	9,150.49	77.55	19.74	18.07	1,285.94	-9,285.84	4,538.79	4,484.55	54.24	83.677	

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

Scientific Drilling, Intl

Anticollision Report

Company:	WPX Energy	Local Co-ordinate Reference:	Well Collie 35-34-22-27 Fee 401H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	GL 3079 + KB 26 = @ 3105.00usft (HP 265)
Reference Site:	Collie 35-34-22-27 Fee Pad	MD Reference:	GL 3079 + KB 26 = @ 3105.00usft (HP 265)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Collie 35-34-22-27 Fee 401H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	Midland District
Reference Design:	Plan #2 ST01	Offset TVD Reference:	Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Helper Fee #1 - Wellbore #1 - As Drilled														Offset Site Error:	0.00 usft
Survey Program: 190-ADK 105														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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
13,600.00	9,237.00	9,237.56	9,152.42	78.95	19.75	18.45	1,285.97	-9,285.88	4,438.82	4,384.53	54.28	81.773			
13,700.00	9,237.00	9,238.49	9,154.35	80.34	19.75	18.84	1,286.01	-9,285.92	4,438.84	4,284.52	54.32	79.870			
13,800.00	9,237.00	9,241.43	9,156.28	81.74	19.75	19.26	1,286.04	-9,285.96	4,238.86	4,184.50	54.37	77.970			
13,900.00	9,237.00	9,243.37	9,158.23	83.15	19.76	19.68	1,286.08	-9,286.00	4,138.89	4,084.48	54.41	76.072			
14,000.00	9,237.00	9,245.32	9,160.17	84.56	19.76	20.13	1,286.11	-9,286.04	4,038.91	3,984.46	54.45	74.176			
14,100.00	9,237.00	9,247.27	9,162.12	85.98	19.77	20.60	1,286.14	-9,286.08	3,938.93	3,884.44	54.49	72.283			
14,200.00	9,237.00	9,249.22	9,164.08	87.40	19.77	21.08	1,286.18	-9,286.12	3,838.96	3,784.42	54.54	70.392			
14,300.00	9,237.00	9,251.18	9,166.04	88.83	19.77	21.59	1,286.21	-9,286.16	3,738.98	3,684.40	54.58	68.503			
14,400.00	9,237.00	9,253.15	9,168.00	90.25	19.78	22.13	1,286.24	-9,286.20	3,639.01	3,584.38	54.63	66.617			
14,500.00	9,237.00	9,255.12	9,169.97	91.69	19.78	22.68	1,286.28	-9,286.24	3,539.03	3,484.36	54.67	64.734			
14,600.00	9,237.00	9,257.09	9,171.94	93.12	19.78	23.27	1,286.31	-9,286.28	3,439.06	3,384.34	54.72	62.854			
14,700.00	9,237.00	9,259.07	9,173.92	94.56	19.79	23.88	1,286.34	-9,286.32	3,339.08	3,284.32	54.76	60.976			
14,800.00	9,237.00	9,261.05	9,175.90	96.00	19.79	24.53	1,286.37	-9,286.36	3,239.11	3,184.30	54.81	59.101			
14,900.00	9,237.00	9,263.04	9,177.89	97.45	19.80	25.21	1,286.40	-9,286.40	3,139.13	3,084.28	54.85	57.229			
14,927.52	9,237.00	9,263.59	9,178.43	97.85	19.80	25.40	1,286.41	-9,286.41	3,111.62	3,056.76	54.86	56.715			
15,000.00	9,237.00	9,265.04	9,179.89	98.80	19.80	-7.41	1,286.43	-9,286.44	3,039.16	2,984.25	54.90	55.354			
15,100.00	9,237.00	9,267.07	9,181.91	100.35	19.80	-44.65	1,286.47	-9,286.48	2,939.19	2,884.21	54.98	53.458			
15,200.00	9,237.00	9,269.12	9,183.97	101.81	19.81	-61.93	1,286.50	-9,286.53	2,839.25	2,784.17	55.09	51.541			
15,300.00	9,237.00	9,271.20	9,186.05	103.28	19.81	-70.33	1,286.53	-9,286.57	2,739.40	2,684.17	55.23	49.603			
15,400.00	9,237.00	9,273.31	9,188.15	104.75	19.82	-75.10	1,286.56	-9,286.61	2,639.65	2,584.25	55.40	47.644			
15,427.52	9,237.00	9,273.89	9,188.74	105.16	19.82	-76.06	1,286.57	-9,286.62	2,612.23	2,556.77	55.46	47.102			
15,500.00	9,237.00	9,275.43	9,190.28	106.22	19.82	-76.44	1,286.59	-9,286.66	2,540.02	2,484.41	55.62	45.670			
15,600.00	9,237.00	9,277.56	9,192.40	107.70	19.82	-76.97	1,286.62	-9,286.70	2,440.43	2,384.58	55.85	43.697			
15,700.00	9,237.00	9,279.68	9,194.53	109.18	19.83	-77.50	1,286.65	-9,286.74	2,340.87	2,284.77	56.10	41.725			
15,800.00	9,237.00	9,281.81	9,196.65	110.65	19.83	-78.03	1,286.68	-9,286.79	2,241.35	2,184.97	56.38	39.754			
15,900.00	9,237.00	9,283.94	9,198.78	112.14	19.84	-78.56	1,286.70	-9,286.83	2,141.87	2,085.18	56.69	37.784			
16,000.00	9,237.00	9,286.07	9,200.91	113.62	19.84	-79.10	1,286.73	-9,286.88	2,042.44	1,985.41	57.03	35.815			
16,100.00	9,237.00	9,288.20	9,203.03	115.10	19.84	-79.63	1,286.76	-9,286.92	1,943.06	1,885.66	57.41	33.847			
16,200.00	9,237.00	9,290.33	9,205.16	116.59	19.85	-80.17	1,286.79	-9,286.97	1,843.75	1,785.92	57.84	31.879			
16,300.00	9,237.00	9,292.46	9,207.30	118.07	19.85	-80.72	1,286.81	-9,287.01	1,744.52	1,686.20	58.32	29.912			
16,400.00	9,237.00	9,294.59	9,209.43	119.56	19.86	-81.26	1,286.84	-9,287.06	1,645.37	1,586.50	58.88	27.946			
16,500.00	9,237.00	9,296.72	9,211.56	121.05	19.86	-81.81	1,286.86	-9,287.10	1,546.34	1,486.82	59.52	25.980			
16,600.00	9,237.00	9,298.86	9,213.69	122.54	19.87	-82.36	1,286.89	-9,287.15	1,447.43	1,387.16	60.27	24.015			
16,700.00	9,237.00	9,300.99	9,215.83	124.04	19.87	-82.91	1,286.91	-9,287.19	1,348.68	1,287.52	61.16	22.052			
16,800.00	9,237.00	9,303.13	9,217.96	125.53	19.87	-83.46	1,286.93	-9,287.24	1,250.12	1,187.90	62.22	20.091			
16,900.00	9,237.00	9,305.28	9,220.10	127.03	19.88	-84.01	1,286.96	-9,287.28	1,151.81	1,088.30	63.51	18.135			
17,000.00	9,237.00	9,307.40	9,222.23	128.52	19.88	-84.57	1,286.98	-9,287.33	1,053.81	988.71	65.10	16.187			
17,100.00	9,237.00	9,309.54	9,224.37	130.02	19.89	-85.12	1,287.00	-9,287.37	956.23	889.13	67.10	14.252			
17,200.00	9,237.00	9,311.68	9,226.51	131.52	19.89	-85.68	1,287.02	-9,287.42	859.19	789.55	69.64	12.337			
17,300.00	9,237.00	9,313.82	9,228.65	133.02	19.89	-86.24	1,287.05	-9,287.46	762.91	689.95	72.96	10.457			
17,400.00	9,237.00	9,315.96	9,230.79	134.52	19.90	-86.80	1,287.07	-9,287.51	667.72	590.33	77.39	8.628			
17,500.00	9,237.00	9,318.10	9,232.93	136.02	19.90	-87.36	1,287.09	-9,287.55	574.16	490.70	83.46	6.880			
17,600.00	9,237.00	9,320.25	9,235.08	137.52	19.91	-87.92	1,287.11	-9,287.60	483.17	391.18	91.99	5.252			
17,677.52	9,237.00	9,321.91	9,236.74	138.69	19.91	-88.38	1,287.12	-9,287.63	415.50	314.41	101.09	4.110			
17,700.00	9,237.00	9,322.39	9,237.22	139.03	19.91	-88.47	1,287.13	-9,287.64	396.52	292.28	104.24	3.804			
17,800.00	9,237.00	9,324.53	9,239.35	140.53	19.92	-89.01	1,287.14	-9,287.69	318.96	195.46	121.49	2.609			
17,900.00	9,237.00	9,326.65	9,241.48	142.03	19.92	-89.58	1,287.16	-9,287.73	250.89	107.18	143.71	1.746			
18,000.00	9,237.00	9,328.77	9,243.60	143.53	19.92	-90.17	1,287.18	-9,287.78	211.40	49.30	162.11	1.304 Level 3			
18,044.74	9,237.00	9,329.71	9,244.54	144.20	19.93	-90.43	1,287.19	-9,287.80	206.79	43.43	163.36	1.266 Level 3, CC, ES, SF			
18,100.00	9,237.00	9,330.88	9,245.70	145.03	19.93	-90.75	1,287.20	-9,287.82	213.79	57.19	156.60	1.365 Level 3			
18,177.52	9,237.00	9,332.50	9,247.33	146.19	19.93	-91.19	1,287.21	-9,287.88	244.44	107.12	137.32	1.780			
18,200.00	9,237.00	9,332.98	9,247.80	146.53	19.93	-91.32	1,287.21	-9,287.87	256.92	125.78	131.14	1.959			

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Helper Fee #1 - Wellbore #1 - As Drilled													Offset Site Error:	0.00 usft
Survey Program: 190-ADK 105													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
18,300.00	9,237.00	9,335.08	9,249.90	148.03	19.94	-91.90	1,287.23	-9,287.91	325.70	218.79	106.90	3.047		
18,400.00	9,237.00	9,337.22	9,252.05	149.53	19.94	-92.49	1,287.24	-9,287.96	407.61	317.53	90.08	4.525		
18,500.00	9,237.00	9,339.37	9,254.20	151.02	19.94	-93.08	1,287.26	-9,288.01	496.19	417.07	79.11	6.272		
18,600.00	9,237.00	9,341.52	9,256.34	152.52	19.95	-93.67	1,287.27	-9,288.05	588.43	516.48	71.96	8.177		
18,700.00	9,237.00	9,343.66	9,258.49	154.03	19.95	-94.26	1,287.29	-9,288.10	682.85	615.82	67.23	10.157		
18,800.00	9,237.00	9,345.81	9,260.63	155.53	19.96	-94.84	1,287.31	-9,288.15	778.68	714.62	64.04	12.159		
18,900.00	9,237.00	9,347.96	9,262.78	157.03	19.96	-95.43	1,287.32	-9,288.19	875.40	813.53	61.87	14.149		
19,000.00	9,237.00	9,350.10	9,264.93	158.53	19.97	-96.01	1,287.34	-9,288.24	972.80	912.43	60.37	16.113		
19,100.00	9,237.00	9,352.25	9,267.07	160.04	19.97	-96.60	1,287.35	-9,288.28	1,070.87	1,011.34	59.34	18.044		
19,200.00	9,237.00	9,354.40	9,269.22	161.54	19.97	-97.18	1,287.37	-9,288.33	1,168.90	1,110.28	58.62	19.941		
19,300.00	9,237.00	9,356.54	9,271.36	163.04	19.98	-97.76	1,287.39	-9,288.38	1,267.40	1,209.28	58.12	21.805		
19,400.00	9,237.00	9,358.69	9,273.51	164.55	19.98	-98.34	1,287.40	-9,288.42	1,366.12	1,308.33	57.79	23.840		
19,481.94	9,237.00	9,360.45	9,275.27	165.57	19.99	-98.82	1,287.41	-9,288.46	1,447.14	1,386.38	60.76	23.817		

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Otis 34 #001 - Wellbore #1 - As Drilled													Offset Site Error: 0.00 usft
Survey Program: 283-INC-ONLY													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
0.00	0.00	2.00	2.00	0.00	0.02	-83.12	1,094.21	-9,073.77	9,139.51				
100.00	100.00	102.00	102.00	0.13	1.01	-83.12	1,094.21	-9,073.77	9,139.51	9,138.37	1.14	8,035.127	
200.00	200.00	202.00	202.00	0.49	1.99	-83.12	1,094.21	-9,073.77	9,139.51	9,137.02	2.48	3,684.057	
300.00	300.00	302.00	302.00	0.85	3.28	-83.12	1,094.21	-9,073.77	9,139.51	9,135.38	4.13	2,215.170	
400.00	400.00	402.00	402.00	1.21	5.85	-83.12	1,094.21	-9,073.77	9,139.51	9,132.45	7.06	1,295.107	
402.52	402.52	404.52	404.52	1.22	5.91	-83.12	1,094.21	-9,073.77	9,139.51	9,132.37	7.13	1,281.673	
500.00	500.00	460.00	459.99	1.57	7.34	-83.12	1,094.21	-9,073.77	9,139.60	9,130.69	8.91	1,028.046	
600.00	600.00	602.01	602.00	1.92	12.90	-83.12	1,094.21	-9,073.77	9,139.51	9,124.68	14.82	616.552	
700.00	700.00	702.01	702.00	2.28	16.81	-83.12	1,094.21	-9,073.77	9,139.51	9,120.41	19.10	478.617	
800.00	800.00	802.10	802.00	2.64	20.93	-83.12	1,094.21	-9,073.77	9,139.51	9,115.93	23.57	387.722	
900.00	900.00	902.15	902.00	3.00	24.95	-83.12	1,094.21	-9,073.77	9,139.51	9,111.56	27.95	327.047	
1,000.00	1,000.00	1,002.20	1,002.00	3.36	28.76	-83.12	1,094.21	-9,073.77	9,139.51	9,107.39	32.12	284.545	
1,100.00	1,100.00	1,102.24	1,102.00	3.72	32.30	-83.12	1,094.21	-9,073.77	9,139.51	9,103.48	36.02	253.720	
1,200.00	1,200.00	1,202.27	1,202.00	4.08	35.86	-83.12	1,094.21	-9,073.77	9,139.51	9,099.57	39.93	228.862	
1,300.00	1,300.00	1,302.27	1,302.00	4.43	39.43	-83.12	1,094.21	-9,073.77	9,139.51	9,095.64	43.67	208.348	
1,400.00	1,400.00	1,402.27	1,402.00	4.79	43.01	-83.12	1,094.21	-9,073.77	9,139.51	9,091.71	47.80	191.209	
1,413.63	1,413.63	1,415.90	1,415.63	4.84	43.49	-83.12	1,094.21	-9,073.77	9,139.51	9,091.17	48.33	189.089	
1,500.00	1,500.00	1,494.00	1,493.65	5.15	46.28	-83.12	1,094.21	-9,073.77	9,139.51	9,088.07	51.44	177.690	
1,547.59	1,547.59	1,549.94	1,549.59	5.32	48.61	-83.12	1,094.21	-9,073.77	9,139.51	9,085.57	53.94	169.452	
1,600.00	1,600.00	1,593.00	1,592.60	5.51	50.41	-83.12	1,094.21	-9,073.77	9,139.51	9,083.59	55.92	163.449	
1,700.00	1,700.00	1,702.40	1,702.00	5.87	55.99	-83.12	1,094.21	-9,073.77	9,139.51	9,077.65	61.85	147.760	
1,706.99	1,706.99	1,709.39	1,708.99	5.89	56.34	-83.12	1,094.21	-9,073.77	9,139.51	9,077.27	62.23	146.855	
1,800.00	1,800.00	1,780.00	1,779.50	6.23	59.94	-83.12	1,094.21	-9,073.77	9,139.53	9,073.36	66.17	138.125	
1,848.06	1,848.06	1,848.56	1,848.06	6.39	63.64	-83.12	1,094.21	-9,073.77	9,139.51	9,069.48	70.03	130.515	
1,900.00	1,900.00	1,900.00	1,899.36	6.59	66.41	-83.12	1,094.21	-9,073.77	9,139.51	9,066.52	72.99	125.215	
1,952.32	1,952.32	1,954.96	1,954.32	6.77	68.78	-83.12	1,094.21	-9,073.77	9,139.51	9,063.96	75.55	120.974	
2,000.00	2,000.00	1,997.00	1,996.29	6.94	70.59	-83.12	1,094.21	-9,073.77	9,139.51	9,061.97	77.53	117.876	
2,048.21	2,048.21	2,050.92	2,050.21	7.12	72.45	-83.12	1,094.21	-9,073.77	9,139.51	9,059.94	79.56	114.873	
2,100.00	2,100.00	2,087.00	2,086.26	7.30	73.69	-83.12	1,094.21	-9,073.77	9,139.52	9,058.53	80.99	112.851	
2,178.85	2,178.85	2,181.59	2,180.85	7.58	76.43	-83.12	1,094.21	-9,073.77	9,139.51	9,055.49	84.01	108.786	
2,200.00	2,200.00	2,187.00	2,186.24	7.66	76.59	-83.12	1,094.21	-9,073.77	9,139.52	9,055.27	84.25	108.486	
2,300.00	2,300.00	2,302.76	2,302.00	8.02	79.41	-83.12	1,094.21	-9,073.77	9,139.51	9,052.08	87.43	104.539	
2,400.00	2,400.00	2,402.76	2,402.00	8.38	81.85	-83.12	1,094.21	-9,073.77	9,139.51	9,049.28	90.22	101.299	
2,500.00	2,500.00	2,502.81	2,502.00	8.74	84.06	-83.12	1,094.21	-9,073.77	9,139.51	9,046.71	92.80	98.488	
2,600.00	2,600.00	2,602.81	2,602.00	9.09	85.86	-83.12	1,094.21	-9,073.77	9,139.51	9,044.55	94.96	96.249	
2,700.00	2,700.00	2,702.81	2,702.00	9.45	87.66	-83.12	1,094.21	-9,073.77	9,139.51	9,042.39	97.12	94.110	
2,800.00	2,799.98	2,802.79	2,801.98	9.81	89.46	-63.33	1,094.21	-9,073.77	9,138.72	9,039.45	99.27	92.057	
2,900.00	2,899.84	2,902.67	2,901.84	10.17	91.01	-63.40	1,094.21	-9,073.77	9,136.37	9,035.20	101.17	90.306	
3,000.00	2,999.45	3,002.29	3,001.45	10.53	92.46	-63.52	1,094.21	-9,073.77	9,132.46	9,029.49	102.98	88.683	
3,100.00	3,098.70	3,101.54	3,100.70	10.88	93.90	-63.68	1,094.21	-9,073.77	9,127.01	9,022.23	104.78	87.106	
3,200.00	3,197.47	3,200.30	3,199.47	11.24	95.34	-63.89	1,094.21	-9,073.77	9,120.03	9,013.46	106.58	85.572	
3,300.00	3,295.62	3,298.46	3,297.62	11.60	96.90	-64.15	1,094.21	-9,073.77	9,111.55	9,003.06	108.49	83.986	
3,400.00	3,393.06	3,395.90	3,395.06	11.97	98.49	-64.46	1,094.21	-9,073.77	9,101.59	8,991.15	110.44	82.410	
3,500.00	3,489.64	3,492.48	3,491.64	12.34	100.07	-64.81	1,094.21	-9,073.77	9,090.18	8,977.80	112.39	80.881	
3,600.00	3,585.27	3,588.11	3,587.27	12.72	101.63	-65.20	1,094.21	-9,073.77	9,077.37	8,963.05	114.33	79.399	
3,692.53	3,672.79	3,675.63	3,674.79	13.09	103.06	-65.61	1,094.21	-9,073.77	9,064.30	8,948.19	116.11	78.066	
3,700.00	3,679.82	3,682.66	3,681.82	13.12	103.18	-65.62	1,094.21	-9,073.77	9,063.20	8,946.95	116.25	77.960	
3,800.00	3,773.88	3,776.72	3,775.88	13.52	104.75	-65.81	1,094.21	-9,073.77	9,048.51	8,930.30	118.22	76.543	
3,900.00	3,867.94	3,870.78	3,869.94	13.94	106.32	-66.00	1,094.21	-9,073.77	9,033.93	8,913.74	120.19	75.161	
4,000.00	3,961.99	3,964.84	3,963.99	14.36	107.90	-66.18	1,094.21	-9,073.77	9,019.45	8,897.27	122.18	73.821	
4,100.00	4,056.05	4,058.90	4,058.05	14.80	109.48	-66.37	1,094.21	-9,073.77	9,005.08	8,880.91	124.18	72.519	
4,200.00	4,150.11	4,152.96	4,152.11	15.24	111.05	-66.56	1,094.21	-9,073.77	8,990.81	8,864.63	126.18	71.255	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Otis 34 #001 - Wellbore #1 - As Drilled													Offset Site Error:	0.00 usft
Survey Program: 283-INC-ONLY													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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,300.00	4,244.17	4,247.03	4,246.17	15.69	112.55	-66.75	1,094.21	-9,073.77	8,976.65	8,848.54	128.11	70.072		
4,400.00	4,338.23	4,341.09	4,340.23	16.14	113.94	-66.94	1,094.21	-9,073.77	8,962.59	8,832.66	129.93	68.978		
4,500.00	4,432.28	4,435.15	4,434.28	16.60	115.33	-67.13	1,094.21	-9,073.77	8,948.65	8,818.88	131.77	67.912		
4,600.00	4,526.34	4,529.20	4,528.34	17.07	116.72	-67.32	1,094.21	-9,073.77	8,934.80	8,801.20	133.61	66.873		
4,700.00	4,620.40	4,623.27	4,622.40	17.54	118.20	-67.51	1,094.21	-9,073.77	8,921.07	8,785.52	135.55	65.815		
4,800.00	4,714.46	4,717.33	4,716.46	18.01	119.84	-67.70	1,094.21	-9,073.77	8,907.44	8,769.80	137.64	64.716		
4,900.00	4,808.52	4,811.38	4,810.52	18.49	121.47	-67.89	1,094.21	-9,073.77	8,893.93	8,754.19	139.74	63.647		
5,000.00	4,902.57	4,905.44	4,904.57	18.98	123.10	-68.09	1,094.21	-9,073.77	8,880.52	8,738.68	141.84	62.610		
5,100.00	4,996.63	4,999.50	4,998.63	19.46	124.74	-68.28	1,094.21	-9,073.77	8,867.22	8,723.28	143.95	61.601		
5,200.00	5,090.69	5,093.56	5,092.69	19.96	126.34	-68.47	1,094.21	-9,073.77	8,854.03	8,708.00	146.03	60.633		
5,300.00	5,184.75	5,187.62	5,186.75	20.45	128.13	-68.67	1,094.21	-9,073.77	8,840.96	8,692.66	148.29	59.618		
5,400.00	5,278.81	5,281.68	5,280.81	20.95	129.88	-68.86	1,094.21	-9,073.77	8,827.99	8,677.46	150.53	58.646		
5,500.00	5,372.87	5,375.73	5,374.87	21.44	131.64	-69.06	1,094.21	-9,073.77	8,815.14	8,662.36	152.77	57.701		
5,600.00	5,466.92	5,469.79	5,468.92	21.95	133.39	-69.25	1,094.21	-9,073.77	8,802.39	8,647.38	155.02	56.783		
5,700.00	5,560.98	5,563.87	5,562.98	22.45	135.15	-69.45	1,094.21	-9,073.77	8,789.76	8,632.50	157.27	55.890		
5,800.00	5,655.04	5,657.93	5,657.04	22.96	136.92	-69.65	1,094.21	-9,073.77	8,777.25	8,617.72	159.53	55.020		
5,900.00	5,749.10	5,751.99	5,751.10	23.46	138.68	-69.84	1,094.21	-9,073.77	8,764.85	8,603.05	161.79	54.174		
6,000.00	5,843.16	5,846.05	5,845.16	23.97	140.56	-70.04	1,094.21	-9,073.77	8,752.56	8,588.39	164.17	53.316		
6,100.00	5,937.21	5,940.11	5,939.21	24.49	142.63	-70.24	1,094.21	-9,073.77	8,740.39	8,573.64	166.74	52.419		
6,200.00	6,031.27	6,034.17	6,033.27	25.00	144.71	-70.44	1,094.21	-9,073.77	8,728.33	8,559.01	169.32	51.550		
6,300.00	6,125.33	6,128.22	6,127.33	25.52	146.78	-70.64	1,094.21	-9,073.77	8,716.38	8,544.49	171.90	50.707		
6,400.00	6,219.39	6,222.28	6,221.39	26.03	148.85	-70.84	1,094.21	-9,073.77	8,704.56	8,530.08	174.48	49.889		
6,500.00	6,313.45	6,316.37	6,315.45	26.55	150.82	-71.04	1,094.21	-9,073.77	8,692.85	8,515.79	177.06	49.096		
6,600.00	6,407.51	6,410.42	6,409.51	27.07	152.90	-71.24	1,094.21	-9,073.77	8,681.25	8,501.71	179.55	48.351		
6,620.95	6,427.21	6,430.13	6,429.21	27.18	153.31	-71.28	1,094.21	-9,073.77	8,678.84	8,498.77	180.07	48.197		
6,700.00	6,501.92	6,504.84	6,503.92	27.58	154.88	-71.27	1,094.21	-9,073.77	8,670.13	8,488.09	182.04	47.628		
6,800.00	6,597.41	6,600.33	6,599.41	28.08	156.89	-71.28	1,094.21	-9,073.77	8,660.19	8,475.65	184.53	46.930		
6,900.00	6,693.88	6,696.80	6,695.88	28.55	158.91	-71.25	1,094.21	-9,073.77	8,651.45	8,464.42	187.03	46.257		
7,000.00	6,791.20	6,794.16	6,793.20	29.00	160.97	-71.25	1,094.21	-9,073.77	8,643.89	8,454.35	189.53	45.606		
7,100.00	6,889.27	6,892.23	6,891.27	29.43	163.13	-71.25	1,094.21	-9,073.77	8,637.49	8,445.37	192.13	44.957		
7,200.00	6,987.96	6,990.91	6,989.96	29.84	165.31	-71.25	1,094.21	-9,073.77	8,632.25	8,437.54	194.71	44.334		
7,300.00	7,087.15	7,090.11	7,089.15	30.22	167.71	-71.25	1,094.21	-9,073.77	8,628.15	8,430.66	197.49	43.889		
7,400.00	7,186.72	7,189.68	7,188.72	30.58	170.33	-71.25	1,094.21	-9,073.77	8,625.19	8,424.72	200.47	43.025		
7,500.00	7,286.55	7,289.52	7,288.55	30.91	172.95	-71.25	1,094.21	-9,073.77	8,623.35	8,419.92	203.43	42.389		
7,600.00	7,386.52	7,389.49	7,388.52	31.23	175.58	-71.25	1,094.21	-9,073.77	8,622.64	8,416.27	206.38	41.781		
7,613.48	7,400.00	7,402.96	7,402.00	31.27	175.94	-91.07	1,094.21	-9,073.77	8,622.63	8,415.86	206.77	41.701		
7,700.00	7,486.52	7,489.49	7,488.52	31.52	178.21	-91.07	1,094.21	-9,073.77	8,622.63	8,413.32	209.31	41.196		
7,800.00	7,586.52	7,589.55	7,588.52	31.82	180.89	-91.07	1,094.21	-9,073.77	8,622.63	8,410.34	212.29	40.618		
7,900.00	7,686.52	7,689.55	7,688.52	32.12	183.63	-91.07	1,094.21	-9,073.77	8,622.63	8,407.30	215.33	40.044		
8,000.00	7,786.52	7,789.55	7,788.52	32.43	186.37	-91.07	1,094.21	-9,073.77	8,622.63	8,404.26	218.37	39.486		
8,100.00	7,886.52	7,889.55	7,888.52	32.73	189.11	-91.07	1,094.21	-9,073.77	8,622.63	8,401.22	221.41	38.944		
8,200.00	7,986.52	7,989.55	7,988.52	33.03	191.84	-91.07	1,094.21	-9,073.77	8,622.63	8,398.17	224.46	38.416		
8,300.00	8,086.52	8,089.62	8,088.52	33.34	194.54	-91.07	1,094.21	-9,073.77	8,622.63	8,395.17	227.46	37.908		
8,400.00	8,186.52	8,189.62	8,188.52	33.64	197.17	-91.07	1,094.21	-9,073.77	8,622.63	8,392.23	230.40	37.424		
8,500.00	8,286.52	8,289.62	8,288.52	33.95	199.81	-91.07	1,094.21	-9,073.77	8,622.63	8,389.29	233.34	36.952		
8,600.00	8,386.52	8,389.62	8,388.52	34.11	202.44	-91.07	1,094.21	-9,073.77	8,622.63	8,386.50	236.13	36.516		
8,700.00	8,486.52	8,489.62	8,488.52	34.11	205.07	-91.07	1,094.21	-9,073.77	8,622.63	8,383.86	238.77	36.113		
8,800.00	8,586.52	8,589.70	8,588.52	34.12	207.74	-91.07	1,094.21	-9,073.77	8,622.63	8,381.18	241.45	35.712		
8,877.52	8,664.04	8,667.22	8,666.04	34.13	209.87	-91.07	1,094.21	-9,073.77	8,622.63	8,378.05	243.58	35.399		
8,900.00	8,686.52	8,689.70	8,688.52	34.13	210.48	-1.07	1,094.21	-9,073.77	8,622.19	8,377.99	244.20	35.308		
8,950.00	8,736.33	8,739.51	8,738.33	34.15	211.85	-1.08	1,094.21	-9,073.77	8,618.05	8,372.48	245.57	35.094		
9,000.00	8,785.59	8,788.77	8,787.59	34.17	213.20	-1.10	1,094.21	-9,073.77	8,609.59	8,362.66	246.94	34.866		

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Otis 34 #001 - Wellbore #1 - As Drilled													Offset Site Error: 0.00 usft
Survey Program: 283-INC-NOLY													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 Tooface (')	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,050.00	8,833.93	8,837.11	8,835.93	34.21	214.52	-1.13	1,094.21	-9,073.77	8,596.87	8,348.60	248.27	34.627	
9,100.00	8,880.97	8,884.15	8,882.97	34.26	215.81	-1.17	1,094.21	-9,073.77	8,579.98	8,330.40	249.58	34.378	
9,150.00	8,928.37	8,929.55	8,928.37	34.33	217.06	-1.22	1,094.21	-9,073.77	8,559.06	8,308.22	250.84	34.121	
9,200.00	8,969.76	8,972.94	8,971.76	34.40	218.25	-1.28	1,094.21	-9,073.77	8,534.26	8,282.21	252.05	33.859	
9,250.00	9,010.83	9,014.01	9,012.83	34.49	219.37	-1.37	1,094.21	-9,073.77	8,505.78	8,252.58	253.20	33.593	
9,300.00	9,049.27	9,052.44	9,051.27	34.60	220.43	-1.48	1,094.21	-9,073.77	8,473.83	8,219.55	254.28	33.325	
9,350.00	9,084.76	9,087.94	9,086.76	34.72	221.40	-1.62	1,094.21	-9,073.77	8,438.64	8,183.36	255.28	33.057	
9,400.00	9,117.06	9,120.24	9,118.06	34.85	222.28	-1.80	1,094.21	-9,073.77	8,400.50	8,144.31	256.19	32.790	
9,450.00	9,145.91	9,122.20	9,120.96	35.00	222.34	-2.04	1,094.21	-9,073.77	8,359.73	8,103.46	256.27	32.620	
9,500.00	9,171.09	9,122.20	9,120.96	35.16	222.34	-2.36	1,094.21	-9,073.77	8,316.69	8,060.39	256.30	32.449	
9,550.00	9,192.42	9,122.20	9,120.96	35.34	222.34	-2.83	1,094.21	-9,073.77	8,271.65	8,015.33	256.32	32.270	
9,600.00	9,209.72	9,122.20	9,120.96	35.54	222.34	-3.56	1,094.21	-9,073.77	8,224.94	7,968.59	256.34	32.086	
9,650.00	9,222.87	9,122.20	9,120.96	35.75	222.34	-4.85	1,094.21	-9,073.77	8,176.88	7,920.52	256.36	31.896	
9,700.00	9,231.76	9,122.20	9,120.96	35.97	222.34	-7.62	1,094.21	-9,073.77	8,127.83	7,871.45	256.38	31.703	
9,750.00	9,236.34	9,122.20	9,120.96	36.21	222.34	-17.74	1,094.21	-9,073.77	8,078.13	7,821.74	256.39	31.507	
9,777.52	9,237.00	9,122.20	9,120.96	36.34	222.34	-53.84	1,094.21	-9,073.77	8,050.65	7,794.25	256.40	31.399	
9,800.00	9,237.00	9,122.20	9,120.96	36.46	222.34	-53.84	1,094.21	-9,073.77	8,028.17	7,771.77	256.40	31.311	
9,900.00	9,237.00	9,122.20	9,120.96	37.00	222.34	-53.84	1,094.21	-9,073.77	7,928.20	7,671.78	256.42	30.919	
10,000.00	9,237.00	9,122.20	9,120.96	37.59	222.34	-53.84	1,094.21	-9,073.77	7,828.23	7,571.79	256.44	30.526	
10,100.00	9,237.00	9,122.20	9,120.96	38.24	222.34	-53.84	1,094.21	-9,073.77	7,728.27	7,471.80	256.47	30.133	
10,200.00	9,237.00	9,122.20	9,120.96	38.94	222.34	-53.84	1,094.21	-9,073.77	7,628.30	7,371.81	256.49	29.741	
10,300.00	9,237.00	9,122.20	9,120.96	39.69	222.34	-53.84	1,094.21	-9,073.77	7,528.34	7,271.82	256.52	29.348	
10,400.00	9,237.00	9,122.20	9,120.96	40.48	222.34	-53.84	1,094.21	-9,073.77	7,428.37	7,171.83	256.55	28.955	
10,500.00	9,237.00	9,122.20	9,120.96	41.32	222.34	-53.84	1,094.21	-9,073.77	7,328.41	7,071.83	256.58	28.562	
10,600.00	9,237.00	9,122.20	9,120.96	42.20	222.34	-53.84	1,094.21	-9,073.77	7,228.45	6,971.84	256.61	28.169	
10,700.00	9,237.00	9,122.20	9,120.96	43.12	222.34	-53.84	1,094.21	-9,073.77	7,128.49	6,871.85	256.64	27.777	
10,800.00	9,237.00	9,122.20	9,120.96	44.08	222.34	-53.84	1,094.21	-9,073.77	7,028.53	6,771.86	256.67	27.384	
10,900.00	9,237.00	9,122.20	9,120.96	45.07	222.34	-53.84	1,094.21	-9,073.77	6,928.57	6,671.86	256.70	26.990	
11,000.00	9,237.00	9,122.20	9,120.96	46.09	222.34	-53.84	1,094.21	-9,073.77	6,828.61	6,571.87	256.74	26.597	
11,100.00	9,237.00	9,122.20	9,120.96	47.14	222.34	-53.84	1,094.21	-9,073.77	6,728.65	6,471.88	256.78	26.204	
11,200.00	9,237.00	9,122.20	9,120.96	48.22	222.34	-53.84	1,094.21	-9,073.77	6,628.70	6,371.88	256.82	25.811	
11,300.00	9,237.00	9,122.20	9,120.96	49.32	222.34	-53.84	1,094.21	-9,073.77	6,528.74	6,271.89	256.86	25.418	
11,400.00	9,237.00	9,122.20	9,120.96	50.45	222.34	-53.84	1,094.21	-9,073.77	6,428.79	6,171.89	256.90	25.025	
11,500.00	9,237.00	9,122.20	9,120.96	51.60	222.34	-53.84	1,094.21	-9,073.77	6,328.84	6,071.90	256.94	24.632	
11,600.00	9,237.00	9,122.20	9,120.96	52.77	222.34	-53.84	1,094.21	-9,073.77	6,228.89	5,971.91	256.99	24.238	
11,700.00	9,237.00	9,122.20	9,120.96	53.96	222.34	-53.84	1,094.21	-9,073.77	6,128.94	5,871.91	257.03	23.845	
11,800.00	9,237.00	9,122.20	9,120.96	55.17	222.34	-53.84	1,094.21	-9,073.77	6,029.00	5,771.92	257.08	23.452	
11,900.00	9,237.00	9,122.20	9,120.96	56.39	222.34	-53.84	1,094.21	-9,073.77	5,929.05	5,671.92	257.13	23.059	
12,000.00	9,237.00	9,122.20	9,120.96	57.63	222.34	-53.84	1,094.21	-9,073.77	5,829.11	5,571.93	257.18	22.665	
12,100.00	9,237.00	9,122.20	9,120.96	58.88	222.34	-53.84	1,094.21	-9,073.77	5,729.17	5,471.94	257.23	22.272	
12,200.00	9,237.00	9,122.20	9,120.96	60.15	222.34	-53.84	1,094.21	-9,073.77	5,629.23	5,371.95	257.29	21.879	
12,300.00	9,237.00	9,122.20	9,120.96	61.43	222.34	-53.84	1,094.21	-9,073.77	5,529.30	5,271.95	257.34	21.486	
12,400.00	9,237.00	9,122.20	9,120.96	62.72	222.34	-53.84	1,094.21	-9,073.77	5,429.36	5,171.96	257.40	21.093	
12,500.00	9,237.00	9,122.20	9,120.96	64.03	222.34	-53.84	1,094.21	-9,073.77	5,329.43	5,071.97	257.46	20.700	
12,600.00	9,237.00	9,122.20	9,120.96	65.34	222.34	-53.84	1,094.21	-9,073.77	5,229.51	4,971.98	257.53	20.307	
12,700.00	9,237.00	9,122.20	9,120.96	66.67	222.34	-53.84	1,094.21	-9,073.77	5,129.58	4,871.99	257.59	19.914	
12,800.00	9,237.00	9,122.20	9,120.96	68.00	222.34	-53.84	1,094.21	-9,073.77	5,029.66	4,772.00	257.66	19.521	
12,900.00	9,237.00	9,122.20	9,120.96	69.34	222.34	-53.84	1,094.21	-9,073.77	4,929.74	4,672.01	257.73	19.128	
13,000.00	9,237.00	9,122.20	9,120.96	70.69	222.34	-53.84	1,094.21	-9,073.77	4,829.82	4,572.03	257.80	18.735	
13,100.00	9,237.00	9,122.20	9,120.96	72.05	222.34	-53.84	1,094.21	-9,073.77	4,729.91	4,472.04	257.87	18.342	
13,200.00	9,237.00	9,122.20	9,120.96	73.42	222.34	-53.84	1,094.21	-9,073.77	4,630.00	4,372.06	257.95	17.949	
13,300.00	9,237.00	9,122.20	9,120.96	74.79	222.34	-53.84	1,094.21	-9,073.77	4,530.10	4,272.07	258.03	17.557	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Otis 34 #001 - Wellbore #1 - As Drilled													Offset Site Error: 0.00 usft
Survey Program: 283-INC-ONLY													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,400.00	9,237.00	9,122.20	9,120.96	76.17	222.34	-53.84	1,094.21	-9,073.77	4,430.20	4,172.09	258.11	17.164	
13,500.00	9,237.00	9,122.20	9,120.96	77.55	222.34	-53.84	1,094.21	-9,073.77	4,330.30	4,072.11	258.19	16.772	
13,600.00	9,237.00	9,122.20	9,120.96	78.95	222.34	-53.84	1,094.21	-9,073.77	4,230.41	3,972.13	258.28	16.379	
13,700.00	9,237.00	9,122.20	9,120.96	80.34	222.34	-53.84	1,094.21	-9,073.77	4,130.53	3,872.16	258.37	15.987	
13,800.00	9,237.00	9,122.20	9,120.96	81.74	222.34	-53.84	1,094.21	-9,073.77	4,030.65	3,772.18	258.46	15.595	
13,900.00	9,237.00	9,122.20	9,120.96	83.15	222.34	-53.84	1,094.21	-9,073.77	3,930.77	3,672.21	258.56	15.203	
14,000.00	9,237.00	9,122.20	9,120.96	84.56	222.34	-53.84	1,094.21	-9,073.77	3,830.91	3,572.24	258.66	14.810	
14,100.00	9,237.00	9,122.20	9,120.96	85.98	222.34	-53.84	1,094.21	-9,073.77	3,731.05	3,472.28	258.77	14.419	
14,200.00	9,237.00	9,122.20	9,120.96	87.40	222.34	-53.84	1,094.21	-9,073.77	3,631.19	3,372.32	258.88	14.027	
14,300.00	9,237.00	9,122.20	9,120.96	88.83	222.34	-53.84	1,094.21	-9,073.77	3,531.35	3,272.36	258.99	13.635	
14,400.00	9,237.00	9,122.20	9,120.96	90.25	222.34	-53.84	1,094.21	-9,073.77	3,431.51	3,172.40	259.11	13.243	
14,500.00	9,237.00	9,122.20	9,120.96	91.69	222.34	-53.84	1,094.21	-9,073.77	3,331.69	3,072.45	259.24	12.852	
14,600.00	9,237.00	9,122.20	9,120.96	93.12	222.34	-53.84	1,094.21	-9,073.77	3,231.88	2,972.51	259.37	12.461	
14,700.00	9,237.00	9,122.20	9,120.96	94.56	222.34	-53.84	1,094.21	-9,073.77	3,132.07	2,872.57	259.50	12.069	
14,800.00	9,237.00	9,122.20	9,120.96	96.00	222.34	-53.84	1,094.21	-9,073.77	3,032.28	2,772.64	259.65	11.678	
14,900.00	9,237.00	9,122.20	9,120.96	97.45	222.34	-53.84	1,094.21	-9,073.77	2,932.51	2,672.71	259.80	11.287	
14,927.52	9,237.00	9,122.20	9,120.96	97.85	222.34	-53.84	1,094.21	-9,073.77	2,905.06	2,645.21	259.85	11.180	
15,000.00	9,237.00	9,122.20	9,120.96	98.90	222.34	-59.16	1,094.21	-9,073.77	2,832.78	2,572.81	259.97	10.896	
15,100.00	9,237.00	9,122.20	9,120.96	100.35	222.34	-64.38	1,094.21	-9,073.77	2,733.19	2,473.00	260.19	10.504	
15,200.00	9,237.00	9,122.20	9,120.96	101.81	222.34	-68.03	1,094.21	-9,073.77	2,633.80	2,373.33	260.47	10.112	
15,300.00	9,237.00	9,122.20	9,120.96	103.28	222.34	-70.72	1,094.21	-9,073.77	2,534.65	2,273.84	260.82	9.718	
15,400.00	9,237.00	9,122.20	9,120.96	104.75	222.34	-72.75	1,094.21	-9,073.77	2,435.82	2,174.58	261.24	9.324	
15,427.52	9,237.00	9,122.20	9,120.96	105.16	222.34	-73.23	1,094.21	-9,073.77	2,408.69	2,147.31	261.37	9.216	
15,500.00	9,237.00	9,122.20	9,120.96	106.22	222.34	-73.23	1,094.21	-9,073.77	2,337.29	2,075.54	261.74	8.930	
15,600.00	9,237.00	9,122.20	9,120.96	107.70	222.34	-73.23	1,094.21	-9,073.77	2,238.90	1,976.59	262.31	8.535	
15,700.00	9,237.00	9,122.20	9,120.96	109.18	222.34	-73.23	1,094.21	-9,073.77	2,140.66	1,877.73	262.93	8.141	
15,800.00	9,237.00	9,122.20	9,120.96	110.65	222.34	-73.23	1,094.21	-9,073.77	2,042.59	1,778.96	263.63	7.748	
15,900.00	9,237.00	9,122.20	9,120.96	112.14	222.34	-73.23	1,094.21	-9,073.77	1,944.72	1,680.30	264.42	7.355	
16,000.00	9,237.00	9,122.20	9,120.96	113.62	222.34	-73.23	1,094.21	-9,073.77	1,847.08	1,581.77	265.32	6.962	
16,100.00	9,237.00	9,122.20	9,120.96	115.10	222.34	-73.23	1,094.21	-9,073.77	1,749.71	1,483.37	266.33	6.570	
16,200.00	9,237.00	9,122.20	9,120.96	116.59	222.34	-73.23	1,094.21	-9,073.77	1,652.64	1,385.15	267.49	6.178	
16,300.00	9,237.00	9,122.20	9,120.96	118.07	222.34	-73.23	1,094.21	-9,073.77	1,555.95	1,287.12	268.83	5.788	
16,400.00	9,237.00	9,122.20	9,120.96	119.56	222.34	-73.23	1,094.21	-9,073.77	1,459.71	1,189.33	270.37	5.399	
16,500.00	9,237.00	9,122.20	9,120.96	121.05	222.34	-73.23	1,094.21	-9,073.77	1,364.00	1,091.83	272.18	5.011	
16,600.00	9,237.00	9,122.20	9,120.96	122.54	222.34	-73.23	1,094.21	-9,073.77	1,268.96	994.67	274.29	4.626	
16,700.00	9,237.00	9,122.20	9,120.96	124.04	222.34	-73.23	1,094.21	-9,073.77	1,174.74	897.95	276.80	4.244	
16,800.00	9,237.00	9,122.20	9,120.96	125.53	222.34	-73.23	1,094.21	-9,073.77	1,081.57	801.79	279.77	3.866	
16,900.00	9,237.00	9,122.20	9,120.96	127.03	222.34	-73.23	1,094.21	-9,073.77	989.72	706.38	283.34	3.493	
17,000.00	9,237.00	9,122.20	9,120.96	128.52	222.34	-73.23	1,094.21	-9,073.77	899.61	611.96	287.65	3.127	
17,100.00	9,237.00	9,122.20	9,120.96	130.02	222.34	-73.23	1,094.21	-9,073.77	811.83	518.95	292.88	2.772	
17,200.00	9,237.00	9,122.20	9,120.96	131.52	222.34	-73.23	1,094.21	-9,073.77	727.20	427.99	299.21	2.430	
17,300.00	9,237.00	9,122.20	9,120.96	133.02	222.34	-73.23	1,094.21	-9,073.77	646.98	340.12	306.86	2.108	
17,400.00	9,237.00	9,122.20	9,120.96	134.52	222.34	-73.23	1,094.21	-9,073.77	573.01	257.11	315.90	1.814	
17,500.00	9,237.00	9,122.20	9,120.96	136.02	222.34	-73.23	1,094.21	-9,073.77	508.04	181.95	326.08	1.558	
17,600.00	9,237.00	9,122.20	9,120.96	137.52	222.34	-73.23	1,094.21	-9,073.77	455.92	119.50	336.41	1.355 Level 3	
17,677.52	9,237.00	9,122.20	9,120.96	138.69	222.34	-73.23	1,094.21	-9,073.77	427.40	84.19	343.21	1.245 Level 2	
17,700.00	9,237.00	9,122.20	9,120.96	139.03	222.34	-73.21	1,094.21	-9,073.77	421.41	76.83	344.77	1.222 Level 2	
17,800.00	9,237.00	9,122.20	9,120.96	140.53	222.34	-73.17	1,094.21	-9,073.77	407.87	59.50	348.37	1.171 Level 2	
17,810.26	9,237.00	9,122.20	9,120.96	140.68	222.34	-73.17	1,094.21	-9,073.77	407.75	59.36	348.38	1.170 Level 2, CC, ES, SF	
17,900.00	9,237.00	9,122.20	9,120.96	142.03	222.34	-73.20	1,094.21	-9,073.77	416.85	71.18	345.67	1.206 Level 2	
18,000.00	9,237.00	9,122.20	9,120.96	143.53	222.34	-73.28	1,094.21	-9,073.77	446.99	109.25	337.75	1.323 Level 3	
18,100.00	9,237.00	9,122.20	9,120.96	145.03	222.34	-73.45	1,094.21	-9,073.77	494.44	167.25	327.19	1.511	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Otis 34 #001 - Wellbore #1 - As Drilled													Offset Site Error:	0.00 usft
Survey Program: 283-INC-ONLY													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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
18,177.52	9,237.00	9,122.20	9,120.96	146.19	222.34	-73.61	1,094.21	-9,073.77	540.28	221.59	318.69	1.695		
18,200.00	9,237.00	9,122.20	9,120.96	146.53	222.34	-73.61	1,094.21	-9,073.77	554.79	238.49	316.29	1.754		
18,300.00	9,237.00	9,122.20	9,120.96	148.03	222.34	-73.61	1,094.21	-9,073.77	625.05	318.62	306.43	2.040		
18,400.00	9,237.00	9,122.20	9,120.96	149.53	222.34	-73.61	1,094.21	-9,073.77	702.56	404.47	298.09	2.357		
18,500.00	9,237.00	9,122.20	9,120.96	151.02	222.34	-73.61	1,094.21	-9,073.77	785.17	493.94	291.23	2.696		
18,600.00	9,237.00	9,122.20	9,120.96	152.52	222.34	-73.61	1,094.21	-9,073.77	871.43	585.77	285.66	3.051		
18,700.00	9,237.00	9,122.20	9,120.96	154.03	222.34	-73.61	1,094.21	-9,073.77	960.36	679.20	281.15	3.416		
18,800.00	9,237.00	9,122.20	9,120.96	155.53	222.34	-73.61	1,094.21	-9,073.77	1,051.28	773.77	277.50	3.788		
18,900.00	9,237.00	9,122.20	9,120.96	157.03	222.34	-73.61	1,094.21	-9,073.77	1,143.71	869.17	274.54	4.166		
19,000.00	9,237.00	9,122.20	9,120.96	158.53	222.34	-73.61	1,094.21	-9,073.77	1,237.33	965.19	272.13	4.547		
19,100.00	9,237.00	9,122.20	9,120.96	160.04	222.34	-73.61	1,094.21	-9,073.77	1,331.87	1,061.70	270.17	4.930		
19,200.00	9,237.00	9,122.20	9,120.96	161.54	222.34	-73.61	1,094.21	-9,073.77	1,427.16	1,158.60	268.55	5.314		
19,300.00	9,237.00	9,122.20	9,120.96	163.04	222.34	-73.61	1,094.21	-9,073.77	1,523.05	1,255.82	267.23	5.699		
19,400.00	9,237.00	9,122.20	9,120.96	164.55	222.34	-73.61	1,094.21	-9,073.77	1,619.44	1,353.30	266.14	6.085		
19,481.94	9,237.00	9,122.20	9,120.96	165.57	222.34	-73.61	1,094.21	-9,073.77	1,698.73	1,430.97	267.76	6.344		

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Pre-Ongard Well #001 - Wellbore #1 - As Drilled												Offset Site Error:	0.00 usft
Survey Program: 395-INC-ONLY												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 Tooface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-71.97	736.91	-2,264.43	2,381.42				
100.00	100.00	78.00	78.00	0.13	0.69	-71.97	736.91	-2,264.43	2,381.32	2,380.50	0.82	2,890.801	
200.00	200.00	178.00	178.00	0.49	1.58	-71.97	736.91	-2,264.43	2,381.32	2,379.25	2.07	1,151.493	
300.00	300.00	278.00	278.00	0.85	2.46	-71.97	736.91	-2,264.43	2,381.32	2,378.01	3.31	718.933	
400.00	400.00	378.00	378.00	1.21	3.35	-71.97	736.91	-2,264.43	2,381.32	2,376.76	4.56	522.612	
500.00	500.00	478.00	478.00	1.57	4.97	-71.97	736.91	-2,264.43	2,381.32	2,374.78	6.54	364.332	
600.00	600.00	578.00	578.00	1.82	6.74	-71.97	736.91	-2,264.43	2,381.32	2,372.65	8.67	274.779	
700.00	700.00	678.00	678.00	2.28	8.51	-71.97	736.91	-2,264.43	2,381.32	2,370.52	10.80	220.565	
800.00	800.00	778.00	778.00	2.64	10.30	-71.97	736.91	-2,264.43	2,381.32	2,368.38	12.94	183.974	
900.00	900.00	878.00	878.00	3.00	12.36	-71.97	736.91	-2,264.43	2,381.32	2,366.96	15.36	155.041	
1,000.00	1,000.00	978.00	978.00	3.36	14.42	-71.97	736.91	-2,264.43	2,381.32	2,363.54	17.77	133.972	
1,015.28	1,015.28	993.28	993.28	3.41	14.73	-71.97	736.91	-2,264.43	2,381.32	2,363.18	18.14	131.247	
1,100.00	1,100.00	1,074.00	1,074.00	3.72	16.39	-71.97	736.91	-2,264.43	2,381.32	2,361.21	20.11	118.427	
1,180.80	1,180.80	1,168.80	1,168.80	4.04	18.90	-71.97	736.91	-2,264.43	2,381.32	2,358.38	22.94	103.806	
1,200.00	1,200.00	1,177.00	1,176.98	4.08	19.11	-71.97	736.91	-2,264.43	2,381.32	2,358.13	23.19	102.688	
1,300.00	1,300.00	1,278.02	1,278.00	4.43	21.97	-71.97	736.91	-2,264.43	2,381.32	2,354.91	26.41	90.173	
1,400.00	1,400.00	1,378.02	1,378.00	4.79	24.81	-71.97	736.91	-2,264.43	2,381.32	2,351.72	29.60	80.456	
1,500.00	1,500.00	1,478.09	1,478.00	5.15	27.59	-71.97	736.91	-2,264.43	2,381.32	2,348.57	32.75	72.722	
1,600.00	1,600.00	1,578.11	1,578.00	5.51	30.38	-71.97	736.91	-2,264.43	2,381.32	2,345.43	35.89	66.343	
1,615.59	1,615.59	1,593.70	1,593.59	5.57	30.83	-71.97	736.91	-2,264.43	2,381.32	2,344.92	36.40	65.426	
1,700.00	1,700.00	1,675.00	1,674.87	5.87	33.29	-71.97	736.91	-2,264.43	2,381.32	2,342.16	39.16	60.808	
1,730.58	1,730.58	1,708.71	1,708.58	5.98	34.41	-71.97	736.91	-2,264.43	2,381.32	2,340.94	40.38	58.968	
1,800.00	1,800.00	1,770.00	1,769.84	6.23	36.43	-71.97	736.91	-2,264.43	2,381.33	2,338.68	42.65	55.831	
1,900.00	1,900.00	1,878.18	1,878.00	6.59	40.20	-71.97	736.91	-2,264.43	2,381.32	2,334.54	46.78	50.903	
2,000.00	2,000.00	1,978.21	1,978.00	6.94	43.87	-71.97	736.91	-2,264.43	2,381.32	2,330.51	50.81	46.866	
2,100.00	2,100.00	2,078.26	2,078.00	7.30	47.53	-71.97	736.91	-2,264.43	2,381.32	2,326.49	54.83	43.431	
2,115.16	2,115.16	2,093.42	2,093.16	7.36	48.08	-71.97	736.91	-2,264.43	2,381.32	2,325.89	55.43	42.958	
2,200.00	2,200.00	2,174.00	2,173.68	7.66	51.01	-71.97	736.91	-2,264.43	2,381.32	2,322.66	58.67	40.590	
2,231.58	2,231.58	2,209.90	2,209.58	7.77	52.28	-71.97	736.91	-2,264.43	2,381.32	2,321.27	60.05	39.654	
2,300.00	2,300.00	2,269.00	2,268.65	8.02	54.37	-71.97	736.91	-2,264.43	2,381.34	2,318.95	62.39	38.168	
2,400.00	2,400.00	2,378.38	2,378.00	8.38	57.94	-71.97	736.91	-2,264.43	2,381.32	2,315.00	66.32	35.906	
2,500.00	2,500.00	2,478.38	2,478.00	8.74	60.93	-71.97	736.91	-2,264.43	2,381.32	2,311.66	69.66	34.183	
2,600.00	2,600.00	2,578.38	2,578.00	9.09	63.91	-71.97	736.91	-2,264.43	2,381.32	2,308.31	73.01	32.618	
2,700.00	2,700.00	2,678.48	2,678.00	9.45	66.74	-71.97	736.91	-2,264.43	2,381.32	2,305.13	76.19	31.253	
2,800.00	2,799.98	2,778.47	2,777.98	9.81	69.07	-52.20	736.91	-2,264.43	2,380.25	2,301.37	78.88	30.176	
2,900.00	2,899.84	2,878.32	2,877.84	10.17	71.25	-52.35	736.91	-2,264.43	2,377.04	2,295.63	81.41	29.198	
3,000.00	2,999.45	2,977.00	2,976.50	10.53	73.40	-52.60	736.91	-2,264.43	2,371.72	2,287.81	83.92	28.263	
3,100.00	3,098.70	3,077.21	3,076.70	10.88	75.58	-52.95	736.91	-2,264.43	2,364.32	2,277.85	86.46	27.346	
3,200.00	3,197.47	3,175.97	3,175.47	11.24	77.74	-53.41	736.91	-2,264.43	2,354.87	2,265.89	88.97	26.467	
3,300.00	3,295.62	3,274.14	3,273.62	11.60	79.89	-53.96	736.91	-2,264.43	2,343.43	2,251.95	91.48	25.618	
3,400.00	3,393.06	3,371.57	3,371.06	11.97	82.02	-54.62	736.91	-2,264.43	2,330.08	2,236.11	93.97	24.796	
3,500.00	3,489.64	3,468.16	3,467.64	12.34	84.14	-55.39	736.91	-2,264.43	2,314.89	2,218.44	96.45	24.001	
3,600.00	3,585.27	3,563.79	3,563.27	12.72	86.23	-56.25	736.91	-2,264.43	2,297.96	2,199.04	98.91	23.232	
3,692.53	3,672.79	3,651.31	3,650.79	13.09	88.15	-57.15	736.91	-2,264.43	2,280.84	2,179.66	101.18	22.542	
3,700.00	3,679.82	3,658.34	3,657.82	13.12	88.31	-57.20	736.91	-2,264.43	2,279.40	2,178.04	101.36	22.488	
3,800.00	3,773.88	3,750.00	3,749.44	13.52	90.31	-57.87	736.91	-2,264.43	2,260.39	2,156.63	103.76	21.785	
3,900.00	3,867.94	3,846.49	3,845.94	13.94	92.33	-58.60	736.91	-2,264.43	2,241.72	2,135.55	106.17	21.115	
4,000.00	3,961.99	3,940.55	3,939.99	14.36	94.29	-59.31	736.91	-2,264.43	2,223.41	2,114.88	108.54	20.486	
4,100.00	4,056.05	4,034.61	4,034.05	14.80	96.26	-60.04	736.91	-2,264.43	2,205.48	2,094.57	110.91	19.885	
4,200.00	4,150.11	4,128.67	4,128.11	15.24	98.22	-60.77	736.91	-2,264.43	2,187.93	2,074.63	113.30	19.311	
4,300.00	4,244.17	4,222.73	4,222.17	15.69	100.19	-61.52	736.91	-2,264.43	2,170.76	2,055.07	115.69	18.763	
4,400.00	4,338.23	4,316.81	4,316.23	16.14	102.08	-62.28	736.91	-2,264.43	2,154.00	2,035.97	118.03	18.250	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Pre-Ongard Well #001 - Wellbore #1 - As Drilled													Offset Site Error:	0.00 usft
Survey Program: 395-INC-ONLY													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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,500.00	4,432.28	4,410.87	4,410.28	16.60	103.95	-63.04	736.91	-2,264.43	2,137.64	2,017.29	120.34	17.763		
4,600.00	4,526.34	4,504.93	4,504.34	17.07	105.82	-63.82	736.91	-2,264.43	2,121.70	1,999.03	122.67	17.296		
4,700.00	4,620.40	4,599.00	4,598.40	17.54	107.76	-64.61	736.91	-2,264.43	2,106.18	1,981.13	125.06	16.842		
4,800.00	4,714.46	4,693.06	4,692.46	18.01	109.83	-65.41	736.91	-2,264.43	2,091.11	1,963.51	127.60	16.388		
4,900.00	4,808.52	4,787.12	4,786.52	18.49	111.91	-66.22	736.91	-2,264.43	2,076.48	1,946.33	130.15	15.955		
5,000.00	4,902.57	4,881.17	4,880.57	18.98	113.98	-67.04	736.91	-2,264.43	2,062.30	1,929.60	132.70	15.541		
5,100.00	4,996.63	4,975.23	4,974.63	19.46	116.06	-67.87	736.91	-2,264.43	2,048.59	1,913.33	135.26	15.146		
5,200.00	5,090.69	5,069.31	5,068.69	19.96	118.15	-68.71	736.91	-2,264.43	2,035.35	1,897.51	137.84	14.766		
5,300.00	5,184.75	5,163.36	5,162.75	20.45	120.43	-69.56	736.91	-2,264.43	2,022.60	1,881.99	140.61	14.384		
5,400.00	5,278.81	5,257.42	5,256.81	20.95	122.70	-70.42	736.91	-2,264.43	2,010.34	1,866.95	143.39	14.020		
5,500.00	5,372.87	5,351.48	5,350.87	21.44	124.98	-71.29	736.91	-2,264.43	1,998.58	1,852.41	146.17	13.673		
5,600.00	5,466.92	5,445.54	5,444.92	21.95	127.25	-72.17	736.91	-2,264.43	1,987.33	1,838.38	148.95	13.342		
5,700.00	5,560.98	5,539.65	5,538.98	22.45	129.44	-73.05	736.91	-2,264.43	1,976.60	1,824.96	151.65	13.034		
5,800.00	5,655.04	5,633.71	5,633.04	22.96	131.41	-73.95	736.91	-2,264.43	1,966.40	1,812.26	154.14	12.757		
5,900.00	5,749.10	5,727.78	5,727.10	23.46	133.39	-74.85	736.91	-2,264.43	1,956.74	1,800.10	156.64	12.492		
6,000.00	5,843.16	5,821.84	5,821.16	23.97	135.37	-75.76	736.91	-2,264.43	1,947.62	1,788.48	159.14	12.238		
6,100.00	5,937.21	5,919.00	5,918.31	24.49	137.42	-76.71	736.91	-2,264.43	1,939.05	1,777.34	161.71	11.991		
6,200.00	6,031.27	6,009.96	6,009.27	25.00	139.52	-77.60	736.91	-2,264.43	1,931.04	1,766.69	164.34	11.750		
6,300.00	6,125.33	6,104.04	6,103.33	25.52	141.72	-78.53	736.91	-2,264.43	1,923.60	1,756.52	167.07	11.513		
6,400.00	6,219.39	6,198.09	6,197.39	26.03	143.99	-79.47	736.91	-2,264.43	1,916.73	1,746.84	169.88	11.283		
6,500.00	6,313.45	6,292.15	6,291.45	26.55	146.27	-80.42	736.91	-2,264.43	1,910.43	1,737.74	172.69	11.063		
6,600.00	6,407.51	6,386.21	6,385.51	27.07	148.54	-81.36	736.91	-2,264.43	1,904.73	1,729.22	175.50	10.853		
6,620.95	6,427.21	6,405.91	6,405.21	27.18	149.02	-81.56	736.91	-2,264.43	1,903.61	1,727.51	176.09	10.810		
6,700.00	6,501.92	6,480.63	6,479.92	27.58	150.83	-82.22	736.91	-2,264.43	1,899.76	1,721.44	178.32	10.654		
6,800.00	6,597.41	6,576.15	6,575.41	28.08	153.19	-82.99	736.91	-2,264.43	1,895.75	1,714.57	181.19	10.463		
6,900.00	6,693.88	6,672.62	6,671.88	28.55	155.73	-83.69	736.91	-2,264.43	1,892.59	1,708.38	184.21	10.274		
7,000.00	6,791.20	6,769.94	6,769.20	29.00	158.29	-84.31	736.91	-2,264.43	1,890.12	1,702.89	187.23	10.095		
7,100.00	6,889.27	6,868.01	6,867.27	29.43	160.86	-84.85	736.91	-2,264.43	1,888.24	1,697.99	190.25	9.925		
7,200.00	6,987.96	6,966.70	6,965.96	29.84	163.46	-85.30	736.91	-2,264.43	1,886.84	1,693.59	193.25	9.764		
7,300.00	7,087.15	7,079.00	7,078.20	30.22	166.41	-85.71	736.91	-2,264.43	1,885.88	1,689.29	196.58	9.593		
7,400.00	7,186.72	7,165.52	7,164.72	30.58	168.41	-85.93	736.91	-2,264.43	1,885.16	1,686.20	198.95	9.475		
7,500.00	7,286.55	7,265.35	7,264.55	30.91	170.72	-86.09	736.91	-2,264.43	1,884.76	1,683.16	201.60	9.349		
7,600.00	7,386.52	7,365.32	7,364.52	31.23	173.03	-86.16	736.91	-2,264.43	1,884.61	1,680.38	204.23	9.228		
7,607.77	7,394.30	7,373.10	7,372.30	31.25	173.21	-86.16	736.91	-2,264.43	1,884.61	1,680.18	204.43	9.219		
7,613.48	7,400.00	7,382.00	7,381.15	31.27	173.42	-105.98	736.91	-2,264.43	1,884.61	1,679.96	204.65	9.209		
7,643.41	7,429.93	7,408.78	7,407.93	31.36	173.93	-105.98	736.91	-2,264.43	1,884.61	1,679.36	205.25	9.182		
7,700.00	7,486.52	7,465.37	7,464.52	31.52	175.00	-105.98	736.91	-2,264.43	1,884.61	1,678.12	206.49	9.127		
7,800.00	7,586.52	7,565.37	7,564.52	31.82	176.90	-105.98	736.91	-2,264.43	1,884.61	1,675.92	208.69	9.031		
7,900.00	7,686.52	7,665.37	7,664.52	32.12	178.79	-105.98	736.91	-2,264.43	1,884.61	1,673.72	210.89	8.937		
8,000.00	7,786.52	7,765.37	7,764.52	32.43	180.69	-105.98	736.91	-2,264.43	1,884.61	1,671.52	213.08	8.844		
8,100.00	7,886.52	7,865.39	7,864.52	32.73	182.60	-105.98	736.91	-2,264.43	1,884.61	1,669.31	215.30	8.754		
8,200.00	7,986.52	7,965.39	7,964.52	33.03	184.61	-105.98	736.91	-2,264.43	1,884.61	1,667.00	217.60	8.661		
8,300.00	8,086.52	8,065.39	8,064.52	33.34	186.94	-105.98	736.91	-2,264.43	1,884.61	1,664.37	220.24	8.557		
8,400.00	8,186.52	8,165.39	8,164.52	33.64	189.46	-105.98	736.91	-2,264.43	1,884.61	1,661.54	223.07	8.449		
8,500.00	8,286.52	8,265.39	8,264.52	33.95	191.98	-105.98	736.91	-2,264.43	1,884.61	1,658.71	225.90	8.343		
8,600.00	8,386.52	8,365.41	8,364.52	34.11	194.61	-105.98	736.91	-2,264.43	1,884.61	1,655.93	228.68	8.241		
8,700.00	8,486.52	8,465.41	8,464.52	34.11	197.34	-105.98	736.91	-2,264.43	1,884.61	1,653.19	231.42	8.144		
8,800.00	8,586.52	8,565.41	8,564.52	34.12	200.07	-105.98	736.91	-2,264.43	1,884.61	1,650.45	234.16	8.049		
8,877.52	8,664.04	8,642.92	8,642.04	34.13	202.19	-105.98	736.91	-2,264.43	1,884.61	1,648.33	236.28	7.976		
8,900.00	8,686.52	8,665.40	8,664.52	34.13	202.80	-16.00	736.91	-2,264.43	1,884.18	1,647.29	238.90	7.954		
8,950.00	8,736.33	8,715.21	8,714.33	34.15	204.16	-16.14	736.91	-2,264.43	1,880.21	1,641.93	238.27	7.891		
9,000.00	8,785.59	8,764.47	8,763.59	34.17	205.51	-16.44	736.91	-2,264.43	1,872.07	1,632.43	239.64	7.812		

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Pre-Ongard Well #001 - Wellbore #1 - As Drilled													Offset Site Error:	0.00 usft
Survey Program: 395-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
9,050.00	8,833.93	8,812.81	8,811.93	34.21	206.83	-16.92	736.91	-2,264.43	1,859.85	1,618.85	241.00	7.717		
9,100.00	8,880.97	8,859.88	8,858.97	34.26	208.11	-17.58	736.91	-2,264.43	1,843.64	1,601.31	242.32	7.608		
9,150.00	8,926.37	8,907.00	8,906.00	34.33	209.40	-18.47	736.91	-2,264.43	1,823.57	1,579.91	243.66	7.484		
9,200.00	8,969.76	8,948.77	8,947.76	34.40	210.41	-19.59	736.91	-2,264.43	1,799.81	1,555.07	244.73	7.354		
9,250.00	9,010.83	8,989.84	8,988.83	34.49	211.41	-21.03	736.91	-2,264.43	1,772.54	1,526.74	245.80	7.211		
9,300.00	9,049.27	9,028.27	9,027.27	34.60	212.34	-22.85	736.91	-2,264.43	1,742.01	1,495.20	246.81	7.058		
9,350.00	9,084.76	9,063.77	9,062.76	34.72	213.19	-25.15	736.91	-2,264.43	1,708.45	1,460.69	247.76	6.896		
9,400.00	9,117.06	9,096.06	9,095.06	34.85	213.98	-28.06	736.91	-2,264.43	1,672.14	1,423.50	248.64	6.725		
9,450.00	9,145.91	9,124.91	9,123.91	35.00	214.67	-31.77	736.91	-2,264.43	1,633.39	1,383.94	249.45	6.548		
9,500.00	9,171.09	9,150.10	9,149.09	35.16	215.28	-36.50	736.91	-2,264.43	1,592.51	1,342.33	250.18	6.365		
9,550.00	9,192.42	9,171.42	9,170.42	35.34	215.80	-42.57	736.91	-2,264.43	1,549.83	1,299.01	250.82	6.179		
9,600.00	9,209.72	9,188.72	9,187.72	35.54	216.22	-50.29	736.91	-2,264.43	1,505.73	1,254.35	251.38	5.990		
9,650.00	9,222.87	9,201.87	9,200.87	35.75	216.53	-59.85	736.91	-2,264.43	1,460.55	1,208.70	251.85	5.799		
9,700.00	9,231.76	9,210.76	9,209.76	35.97	216.75	-71.11	736.91	-2,264.43	1,414.68	1,162.46	252.22	5.609		
9,750.00	9,236.34	9,215.34	9,214.34	36.21	216.86	-83.32	736.91	-2,264.43	1,368.50	1,115.99	252.50	5.420		
9,777.52	9,237.00	9,216.00	9,215.00	36.34	216.88	-90.00	736.91	-2,264.43	1,343.09	1,090.47	252.62	5.317		
9,800.00	9,237.00	9,216.00	9,215.00	36.46	216.88	-90.00	736.91	-2,264.43	1,322.38	1,069.67	252.70	5.233		
9,800.00	9,237.00	9,216.00	9,215.00	37.00	216.88	-90.00	736.91	-2,264.43	1,231.02	977.91	253.11	4.864		
10,000.00	9,237.00	9,216.00	9,215.00	37.59	216.88	-90.00	736.91	-2,264.43	1,141.12	887.53	253.59	4.500		
10,100.00	9,237.00	9,216.00	9,215.00	38.24	216.88	-90.00	736.91	-2,264.43	1,053.03	798.88	254.15	4.143		
10,200.00	9,237.00	9,216.00	9,215.00	38.94	216.88	-90.00	736.91	-2,264.43	967.27	712.45	254.81	3.796		
10,300.00	9,237.00	9,216.00	9,215.00	39.69	216.88	-90.00	736.91	-2,264.43	884.50	628.90	255.60	3.460		
10,400.00	9,237.00	9,216.00	9,215.00	40.48	216.88	-90.00	736.91	-2,264.43	805.65	549.13	256.52	3.141		
10,500.00	9,237.00	9,216.00	9,215.00	41.32	216.88	-90.00	736.91	-2,264.43	731.99	474.41	257.58	2.842		
10,600.00	9,237.00	9,216.00	9,215.00	42.20	216.88	-90.00	736.91	-2,264.43	665.23	406.49	258.74	2.571		
10,700.00	9,237.00	9,216.00	9,215.00	43.12	216.88	-90.00	736.91	-2,264.43	607.67	347.75	259.92	2.338		
10,800.00	9,237.00	9,216.00	9,215.00	44.08	216.88	-90.00	736.91	-2,264.43	562.14	301.20	260.94	2.154		
10,800.00	9,237.00	9,216.00	9,215.00	45.07	216.88	-90.00	736.91	-2,264.43	531.73	270.21	261.51	2.033		
11,000.00	9,237.00	9,216.00	9,215.00	46.09	216.88	-90.00	736.91	-2,264.43	519.10	257.71	261.39	1.986		
11,016.34	9,237.00	9,216.00	9,215.00	46.26	216.88	-90.00	736.91	-2,264.43	518.84	257.55	261.29	1.986	CC, ES, SF	
11,100.00	9,237.00	9,216.00	9,215.00	47.14	216.88	-90.00	736.91	-2,264.43	525.54	265.06	260.49	2.018		
11,200.00	9,237.00	9,216.00	9,215.00	48.22	216.88	-90.00	736.91	-2,264.43	550.39	291.39	259.00	2.125		
11,300.00	9,237.00	9,216.00	9,215.00	49.32	216.88	-90.00	736.91	-2,264.43	591.32	334.04	257.28	2.298		
11,400.00	9,237.00	9,216.00	9,215.00	50.45	216.88	-90.00	736.91	-2,264.43	645.28	389.66	255.63	2.524		
11,500.00	9,237.00	9,216.00	9,215.00	51.60	216.88	-90.00	736.91	-2,264.43	709.31	455.11	254.20	2.790		
11,600.00	9,237.00	9,216.00	9,215.00	52.77	216.88	-90.00	736.91	-2,264.43	780.93	527.89	253.05	3.086		
11,700.00	9,237.00	9,216.00	9,215.00	53.96	216.88	-90.00	736.91	-2,264.43	858.25	606.10	252.14	3.404		
11,800.00	9,237.00	9,216.00	9,215.00	55.17	216.88	-90.00	736.91	-2,264.43	939.85	688.40	251.45	3.738		
11,900.00	9,237.00	9,216.00	9,215.00	56.39	216.88	-90.00	736.91	-2,264.43	1,024.72	773.79	250.93	4.084		
12,000.00	9,237.00	9,216.00	9,215.00	57.63	216.88	-90.00	736.91	-2,264.43	1,112.11	861.57	250.54	4.439		
12,100.00	9,237.00	9,216.00	9,215.00	58.88	216.88	-90.00	736.91	-2,264.43	1,201.46	951.22	250.24	4.801		
12,200.00	9,237.00	9,216.00	9,215.00	60.15	216.88	-90.00	736.91	-2,264.43	1,292.38	1,042.36	250.02	5.169		
12,300.00	9,237.00	9,216.00	9,215.00	61.43	216.88	-90.00	736.91	-2,264.43	1,384.55	1,134.70	249.85	5.541		
12,400.00	9,237.00	9,216.00	9,215.00	62.72	216.88	-90.00	736.91	-2,264.43	1,477.74	1,228.01	249.73	5.917		
12,500.00	9,237.00	9,216.00	9,215.00	64.03	216.88	-90.00	736.91	-2,264.43	1,571.76	1,322.12	249.65	6.296		
12,600.00	9,237.00	9,216.00	9,215.00	65.34	216.88	-90.00	736.91	-2,264.43	1,666.49	1,416.90	249.58	6.677		
12,700.00	9,237.00	9,216.00	9,215.00	66.67	216.88	-90.00	736.91	-2,264.43	1,761.79	1,512.25	249.54	7.060		
12,800.00	9,237.00	9,216.00	9,215.00	68.00	216.88	-90.00	736.91	-2,264.43	1,857.59	1,608.07	249.52	7.445		
12,900.00	9,237.00	9,216.00	9,215.00	69.34	216.88	-90.00	736.91	-2,264.43	1,953.81	1,704.30	249.51	7.831		
13,000.00	9,237.00	9,216.00	9,215.00	70.69	216.88	-90.00	736.91	-2,264.43	2,050.39	1,800.88	249.51	8.218		
13,100.00	9,237.00	9,216.00	9,215.00	72.05	216.88	-90.00	736.91	-2,264.43	2,147.29	1,897.77	249.52	8.606		
13,200.00	9,237.00	9,216.00	9,215.00	73.42	216.88	-90.00	736.91	-2,264.43	2,244.45	1,994.92	249.54	8.994		

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
 Project: Eddy County, New Mexico (NAD 83)
 Reference Site: Collie 35-34-22-27 Fee Pad
 Site Error: 0.00 usft
 Reference Well: Collie 35-34-22-27 Fee 401H
 Well Error: 0.00 usft
 Reference Wellbore: ST01
 Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Midland District
 Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Pre-Ongard Well #001 - Wellbore #1 - As Drilled													Offset Site Error: 0.00 usft
Survey Program: 395-INC-ONLY													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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,300.00	9,237.00	9,216.00	9,215.00	74.79	216.88	-90.00	736.91	-2,264.43	2,341.86	2,092.30	249.56	9.384	
13,400.00	9,237.00	9,216.00	9,215.00	76.17	216.88	-90.00	736.91	-2,264.43	2,439.47	2,189.89	249.59	9.774	
13,500.00	9,237.00	9,216.00	9,215.00	77.55	216.88	-90.00	736.91	-2,264.43	2,537.28	2,287.66	249.62	10.165	
13,600.00	9,237.00	9,216.00	9,215.00	78.95	216.88	-90.00	736.91	-2,264.43	2,635.24	2,385.59	249.66	10.556	
13,700.00	9,237.00	9,216.00	9,215.00	80.34	216.88	-90.00	736.91	-2,264.43	2,733.35	2,483.66	249.70	10.947	
13,800.00	9,237.00	9,216.00	9,215.00	81.74	216.88	-90.00	736.91	-2,264.43	2,831.60	2,581.86	249.74	11.338	
13,900.00	9,237.00	9,216.00	9,215.00	83.15	216.88	-90.00	736.91	-2,264.43	2,929.96	2,680.18	249.78	11.730	
14,000.00	9,237.00	9,216.00	9,215.00	84.56	216.88	-90.00	736.91	-2,264.43	3,028.44	2,778.61	249.83	12.122	
14,100.00	9,237.00	9,216.00	9,215.00	85.98	216.88	-90.00	736.91	-2,264.43	3,127.00	2,877.13	249.88	12.514	
14,200.00	9,237.00	9,216.00	9,215.00	87.40	216.88	-90.00	736.91	-2,264.43	3,225.66	2,975.73	249.93	12.906	
14,300.00	9,237.00	9,216.00	9,215.00	88.83	216.88	-90.00	736.91	-2,264.43	3,324.40	3,074.42	249.98	13.299	
14,400.00	9,237.00	9,216.00	9,215.00	90.25	216.88	-90.00	736.91	-2,264.43	3,423.21	3,173.17	250.04	13.691	
14,500.00	9,237.00	9,216.00	9,215.00	91.69	216.88	-90.00	736.91	-2,264.43	3,522.09	3,272.00	250.09	14.083	
14,600.00	9,237.00	9,216.00	9,215.00	93.12	216.88	-90.00	736.91	-2,264.43	3,621.02	3,370.88	250.15	14.476	
14,700.00	9,237.00	9,216.00	9,215.00	94.56	216.88	-90.00	736.91	-2,264.43	3,720.02	3,469.82	250.20	14.868	
14,800.00	9,237.00	9,216.00	9,215.00	96.00	216.88	-90.00	736.91	-2,264.43	3,819.07	3,568.80	250.26	15.260	
14,900.00	9,237.00	9,216.00	9,215.00	97.45	216.88	-90.00	736.91	-2,264.43	3,918.16	3,667.84	250.32	15.652	
14,927.52	9,237.00	9,216.00	9,215.00	97.85	216.88	-90.00	736.91	-2,264.43	3,945.44	3,695.10	250.34	15.760	
15,000.00	9,237.00	9,216.00	9,215.00	98.90	216.88	-90.00	736.91	-2,264.43	4,017.36	3,766.98	250.39	16.045	
15,100.00	9,237.00	9,216.00	9,215.00	100.35	216.88	-90.00	736.91	-2,264.43	4,116.79	3,866.34	250.45	16.438	
15,200.00	9,237.00	9,216.00	9,215.00	101.81	216.88	-90.00	736.91	-2,264.43	4,216.41	3,965.90	250.51	16.831	
15,300.00	9,237.00	9,216.00	9,215.00	103.28	216.88	-90.00	736.91	-2,264.43	4,316.18	4,065.61	250.57	17.225	
15,400.00	9,237.00	9,216.00	9,215.00	104.75	216.88	-90.00	736.91	-2,264.43	4,416.06	4,165.42	250.64	17.619	
15,427.52	9,237.00	9,216.00	9,215.00	105.16	216.88	-90.00	736.91	-2,264.43	4,443.55	4,192.90	250.65	17.728	
15,500.00	9,237.00	9,216.00	9,215.00	106.22	216.88	-90.00	736.91	-2,264.43	4,516.00	4,265.29	250.70	18.014	
15,600.00	9,237.00	9,216.00	9,215.00	107.70	216.88	-90.00	736.91	-2,264.43	4,615.94	4,365.17	250.77	18.407	
15,700.00	9,237.00	9,216.00	9,215.00	109.18	216.88	-90.00	736.91	-2,264.43	4,715.88	4,465.05	250.83	18.801	
15,800.00	9,237.00	9,216.00	9,215.00	110.65	216.88	-90.00	736.91	-2,264.43	4,815.83	4,564.93	250.90	19.194	
15,900.00	9,237.00	9,216.00	9,215.00	112.14	216.88	-90.00	736.91	-2,264.43	4,915.78	4,664.82	250.96	19.588	
16,000.00	9,237.00	9,216.00	9,215.00	113.62	216.88	-90.00	736.91	-2,264.43	5,015.73	4,764.70	251.03	19.980	
16,100.00	9,237.00	9,216.00	9,215.00	115.10	216.88	-90.00	736.91	-2,264.43	5,115.69	4,864.59	251.10	20.373	
16,200.00	9,237.00	9,216.00	9,215.00	116.59	216.88	-90.00	736.91	-2,264.43	5,215.64	4,964.47	251.17	20.765	
16,300.00	9,237.00	9,216.00	9,215.00	118.07	216.88	-90.00	736.91	-2,264.43	5,315.60	5,064.36	251.24	21.157	
16,400.00	9,237.00	9,216.00	9,215.00	119.56	216.88	-90.00	736.91	-2,264.43	5,415.56	5,164.25	251.31	21.549	
16,500.00	9,237.00	9,216.00	9,215.00	121.05	216.88	-90.00	736.91	-2,264.43	5,515.52	5,264.14	251.38	21.941	
16,600.00	9,237.00	9,216.00	9,215.00	122.54	216.88	-90.00	736.91	-2,264.43	5,615.48	5,364.02	251.45	22.332	
16,700.00	9,237.00	9,216.00	9,215.00	124.04	216.88	-90.00	736.91	-2,264.43	5,715.44	5,463.91	251.53	22.723	
16,800.00	9,237.00	9,216.00	9,215.00	125.53	216.88	-90.00	736.91	-2,264.43	5,815.41	5,563.80	251.60	23.114	
16,900.00	9,237.00	9,216.00	9,215.00	127.03	216.88	-90.00	736.91	-2,264.43	5,915.37	5,663.70	251.68	23.504	
17,000.00	9,237.00	9,216.00	9,215.00	128.52	216.88	-90.00	736.91	-2,264.43	6,015.34	5,763.59	251.75	23.894	
17,100.00	9,237.00	9,216.00	9,215.00	130.02	216.88	-90.00	736.91	-2,264.43	6,115.31	5,863.48	251.83	24.284	
17,200.00	9,237.00	9,216.00	9,215.00	131.52	216.88	-90.00	736.91	-2,264.43	6,215.28	5,963.37	251.91	24.673	
17,300.00	9,237.00	9,216.00	9,215.00	133.02	216.88	-90.00	736.91	-2,264.43	6,315.25	6,063.26	251.98	25.062	
17,400.00	9,237.00	9,216.00	9,215.00	134.52	216.88	-90.00	736.91	-2,264.43	6,415.22	6,163.15	252.06	25.451	
17,500.00	9,237.00	9,216.00	9,215.00	136.02	216.88	-90.00	736.91	-2,264.43	6,515.19	6,263.05	252.14	25.839	
17,600.00	9,237.00	9,216.00	9,215.00	137.52	216.88	-90.00	736.91	-2,264.43	6,615.16	6,362.94	252.22	26.228	
17,677.52	9,237.00	9,216.00	9,215.00	138.69	216.88	-90.00	736.91	-2,264.43	6,692.66	6,440.37	252.28	26.528	
17,700.00	9,237.00	9,216.00	9,215.00	139.03	216.88	-90.00	736.91	-2,264.43	6,715.13	6,462.83	252.30	26.616	
17,800.00	9,237.00	9,216.00	9,215.00	140.53	216.88	-90.00	736.91	-2,264.43	6,815.07	6,562.69	252.38	27.003	
17,900.00	9,237.00	9,216.00	9,215.00	142.03	216.88	-90.00	736.91	-2,264.43	6,914.93	6,662.47	252.47	27.390	
18,000.00	9,237.00	9,216.00	9,215.00	143.53	216.88	-90.00	736.91	-2,264.43	7,014.69	6,762.14	252.55	27.776	
18,100.00	9,237.00	9,216.00	9,215.00	145.03	216.88	-90.00	736.91	-2,264.43	7,114.33	6,861.70	252.63	28.161	

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

Scientific Drilling, Intl

Anticollision Report

Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Offset Design Collie 35-34-22-27 Fee Pad - Pre-Ongard Well #001 - Wellbore #1 - As Drilled													Offset Site Error:	0.00 usft
Survey Program: 395-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
18,177.52	9,237.00	9,216.00	9,215.00	146.19	216.88	-90.00	736.91	-2,264.43	7,191.46	6,938.76	252.70	28.459		
18,200.00	9,237.00	9,216.00	9,215.00	146.53	216.88	-90.00	738.91	-2,264.43	7,213.82	6,961.10	252.72	28.545		
18,300.00	9,237.00	9,216.00	9,215.00	148.03	216.88	-90.00	736.91	-2,264.43	7,313.28	7,060.47	252.80	28.929		
18,400.00	9,237.00	9,216.00	9,215.00	149.53	216.88	-90.00	736.91	-2,264.43	7,412.74	7,159.85	252.89	29.312		
18,500.00	9,237.00	9,216.00	9,215.00	151.02	216.88	-90.00	736.91	-2,264.43	7,512.22	7,259.25	252.98	29.695		
18,600.00	9,237.00	9,216.00	9,215.00	152.52	216.88	-90.00	736.91	-2,264.43	7,611.72	7,358.65	253.07	30.078		
18,700.00	9,237.00	9,216.00	9,215.00	154.03	216.88	-90.00	736.91	-2,264.43	7,711.23	7,458.07	253.16	30.460		
18,800.00	9,237.00	9,216.00	9,215.00	155.53	216.88	-90.00	736.91	-2,264.43	7,810.75	7,557.50	253.25	30.843		
18,900.00	9,237.00	9,216.00	9,215.00	157.03	216.88	-90.00	736.91	-2,264.43	7,910.28	7,656.95	253.34	31.224		
19,000.00	9,237.00	9,216.00	9,215.00	158.53	216.88	-90.00	736.91	-2,264.43	8,009.83	7,756.40	253.43	31.606		
19,100.00	9,237.00	9,216.00	9,215.00	160.04	216.88	-90.00	736.91	-2,264.43	8,109.38	7,855.87	253.52	31.987		
19,200.00	9,237.00	9,216.00	9,215.00	161.54	216.88	-90.00	736.91	-2,264.43	8,208.95	7,955.34	253.61	32.368		
19,300.00	9,237.00	9,216.00	9,215.00	163.04	216.88	-90.00	736.91	-2,264.43	8,308.53	8,054.83	253.70	32.749		
19,400.00	9,237.00	9,216.00	9,215.00	164.55	216.88	-90.00	736.91	-2,264.43	8,408.12	8,154.32	253.80	33.129		
19,481.94	9,237.00	9,216.00	9,215.00	165.57	216.88	-90.00	736.91	-2,264.43	8,489.72	8,232.64	257.08	33.023		

Scientific Drilling, Intl

Anticollision Report

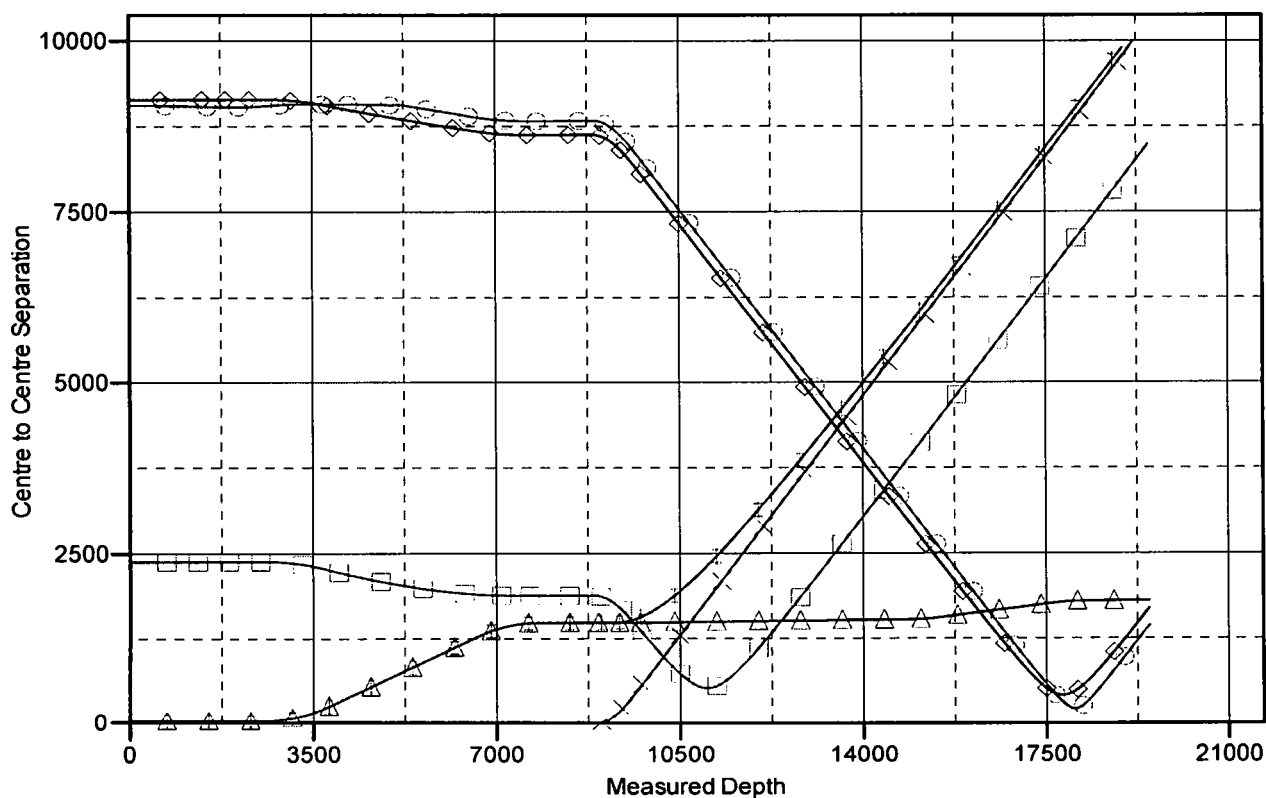
Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Reference Depths are relative to GL 3079 + KB 26 = @ 3105.00usft (H)
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: Collie 35-34-22-27 Fee 401H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.10°

Ladder Plot



LEGEND

22-27 Fee 401H, ST01, Plan #2 ST01 V0 Pre-Ongard Well #001, Wellbore #1, As Drilled V0 Otis 34 #001, Wellbore #1, As Drilled V0
 22-27 Fee 401H, Wellbore #1, Plan #1 PH V0 Helper Fee #1, Wellbore #1, As Drilled V0 Collie 35-34-22-27 Fee 401H, Wellbore #1, As Drilled V0

Scientific Drilling, Intl

Anticollision Report

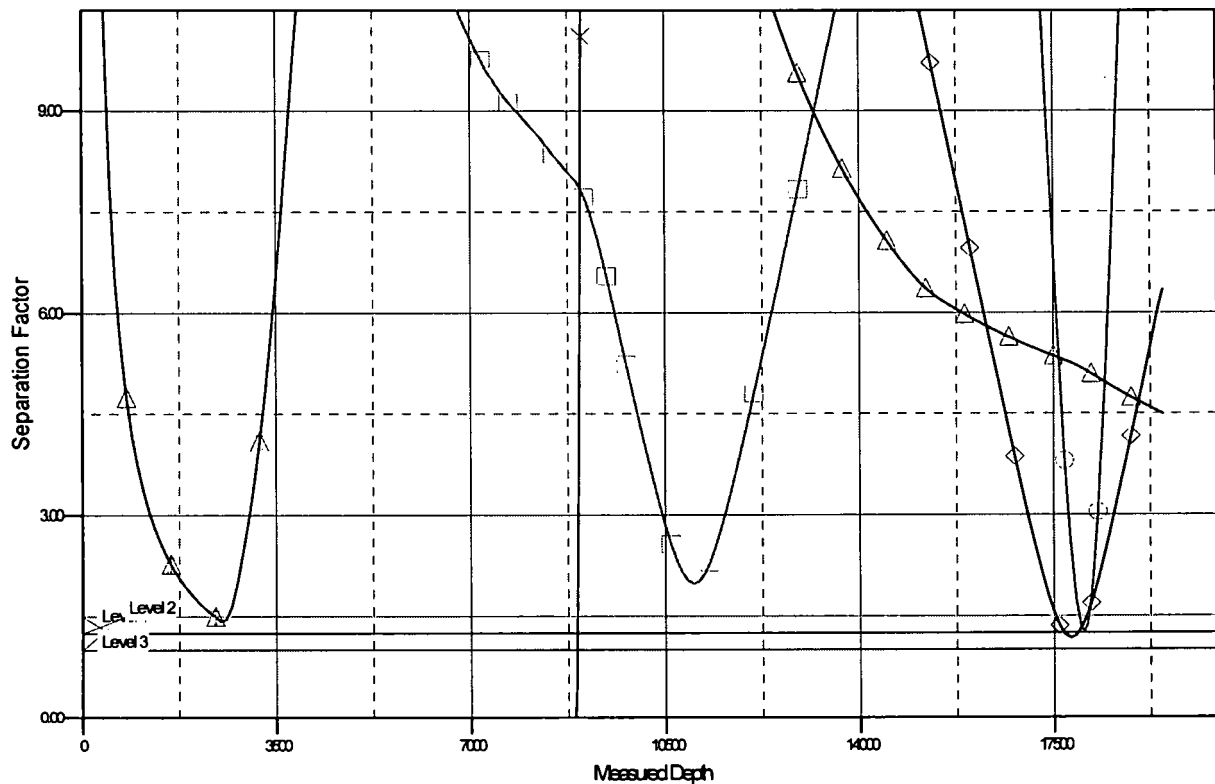
Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Reference Site: Collie 35-34-22-27 Fee Pad
Site Error: 0.00 usft
Reference Well: Collie 35-34-22-27 Fee 401H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: Plan #2 ST01

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Midland District
Offset TVD Reference: Offset Datum

Reference Depths are relative to GL 3079 + KB 26 = @ 3105.00usft (H)
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: Collie 35-34-22-27 Fee 401H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.10°

Separation Factor Plot



LEGEND

22-27 Fee 401H, ST01, Plan #2 ST01 V0 Pre-Ongard Well #001, Wellbore #1, As Drilled V0 Otis 34 #001, Wellbore #1, As Drilled V0
22-27 Fee 401H, Wellbore #1, Plan #1 PH V0 Helper Fee #1, Wellbore #1, As Drilled V0 Collie 35-34-22-27 Fee 401H, Wellbore

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMNM7066

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other8. Well Name and No.
WILLIAMSON FEDERAL COM 12. Name of Operator
DEVON ENERGYContact: MAX LUBITZ
E-Mail: max.lubit@dmv.com9. API Well No.
30-015-225883a. Address
333 WEST SHERIDAN AVENUE
OKLAHOMA CITY, OK 731023b. Phone No. (include area code)
Ph: 580-302-459310. Field and Pool or Exploratory Area
DIAMOND MOUND, MORROW

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 12 T16S R27E Mer NMP 660FNL 1980FWL

**NM OIL CONSERVATION
ARTESIA DISTRICT**

11. County or Parish, State

EDDY COUNTY, NM

JAN 31 2019

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NAME OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
☒ Notice of Intent	☐ Acidize ☐ Deepen ☐ Production (Start/Resume) ☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing ☐ Hydraulic Fracturing ☐ Reclamation ☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair ☐ New Construction ☐ Recomplete ☐ Other
	☐ Change Plans ☒ Plug and Abandon ☐ Temporarily Abandon
	☐ Convert to Injection ☐ Plug Back ☐ Water Disposal

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

1. MIRU P&A unit.

2. Pull packer and 2-3/8" tubing from 8847'.

3. Set CIBP at 8850'. Tag CIBP. Spot 25 sx CI H 8850-8750'. (Open Morrow perfs at 8893'), 190' min. 8660'

4. Spot 25 sx CI H 8200-8100'. (T. Morrow 8258) Strauss, 180' min. 8020'

5. Spot 25 sx CI C 6300-6200'. (T. Wolfcamp 6356') 6406 - 6236.

6. Spot 25 sx CI C 5150-5050'. (T. Abo 5113') 150' min. 5000'.

7. Spot 25 sx CI C 3050-2950'. (T. Glorieta 3023') 130' min. 2920'.

8. Spot 25 sx CI C from 1650-1540. WOC & tag. (Shoe 1590')

9. Spot 25 sx CI C from 400-300. WOC & tag. (Shoe 354')

10. Perf @ 140'. Pump 35 sx CI C in/out to surface.

11. Cut wellhead off 3' BGL. Set dry hole marker.

GC
Accepted for record. NMOC
2/4/19
2/5/19SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #449697 verified by the BLM Well Information System
For DEVON ENERGY, sent to the Carlsbad
Committed to AFMSS for processing by JAMES AMOS on 01/09/2019 ()

Name (Printed/Typed) MAX LUBITZ

Title ENGINEER

Signature (Electronic Submission)

Date 01/08/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <i>James A. Amos</i>	Title <i>SPE</i>	Date <i>1-25-19</i>
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Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office *CFD*

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

ENTERED
1-25-19

DEVON ENERGY PRODUCTION COMPANY LP

Well Name: WILLIAMSON COM FEDERAL 1	Field: Parkway North - DM		
Location: SEC 12-T16S-R27E	County: Eddy	State: New Mexico	
Elevation:	Spud Date: 7/28/1978	Compl Date: 11/28/1978	
API#: 30-015-22588	Prepared by:	Date:	Rev:

CURRENT WELLBORE

17-1/2" Hole ✓
13-3/8", 54.5#, H-40 @ 354' ✓
 Cmt'd w/400 sx to surface ✓

11" Hole ✓
8-5/8", 24#, J55, @ 1590' ✓
 Cmt'd w/1020 sx to surf ✓ 1" from 578

Perforations
 8893-8989 Atoka ✓

7-7/8" Hole ✓
4-1/2", 11.6#, 10.5#, K55, @ 9119' ✓
 Cmt'd w/1000 sx CI H cmt to 3600' then circ'd to surf

on 7/31/81

9119' TVD

2-3/8" tbg to with packer at 8847

FMS	TOP	
	MEAS. DEPTH	
Queen	913	✓
San Andres	1643	✓
Glorietta	3023	✓
Tubb	4362	✓
Abo	5113	✓
Wolfcamp	6356	✓
Wolfcamp-		
Bursum	7212	✓
Strawn	8258	✓
Atoka	8682	✓
Miss Chester		
Shale	8996	✓
Miss, Lime	9090	✓

Remedial Cmt 7/31/81 Art @ 5910, SQZ 1100 SX Cmt to Surf.

DEVON ENERGY PRODUCTION COMPANY LP

Well Name: WILLIAMSON COM FEDERAL 1		Field: Parkway North - DM	
Location:	SEC 12-T16S-R27E	County: Eddy	State: New Mexico
Elevation:		Spud Date: 7/28/1978	Compl Date: 11/28/1978
API#: 30-015-22588	Prepared by:	Date:	Rev:

PROPOSED WELLBORE

17-1/2" Hole
13-3/8", 54.5#, H-40 @ 354'
 Cmt'd w/400 sx to surface

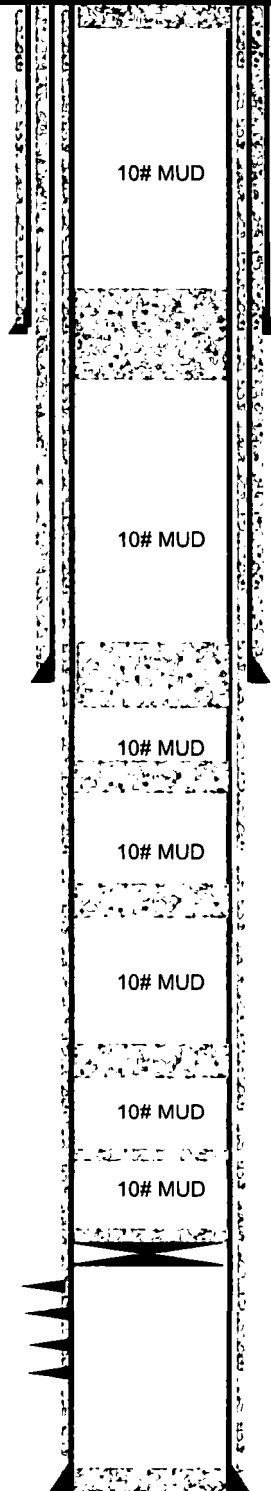
11" Hole
8-5/8", 24#, J55, @ 1590'
 Cmt'd w/1020 sx to surf

Proposed:
 1. Spot 25 sx CI H 8200-8100'.
 (T. Morrow 8258)

Perforations
 8893-8989 Atoka

7-7/8" Hole
4-1/2", 11.6#, 10.5#, K55, @ 9119'
 Cmt'd w/1000 sx CI H cmt to 3600' then circ'd to surf

on 7/31/81



9119' TVD

Proposed:
 1. Perf @ 140'
 2. Pump CI CI from 140'to surface.
 3. Cut WH off 3' BGL, Set dry hole marker.

Proposed:
 1. Spot 25 sx CI C from 400-300.
 (Shoe 354')

Proposed:
 1. Spot 25 sx CI C from 1650-1540. WOC & tag.
 (Shoe 1590')

Proposed:
 1. Spot 25 sx CI C 3050-2950'.
 (T. Giorieta 3023')

Proposed:
 1. Spot 25 sx CI C 5150-5050'.
 (T. Abo 5113')

Proposed:
 1. Spot 25 sx CI C 6300-6200'.
 (T. Wolfcamp 6356')

Proposed:
 1. Set CIBP at 8850'.
 2. Spot 25 sx CI H 8850-8750'.

BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220
575-234-5972

Permanent Abandonment of Federal Wells
Conditions of Approval

Failure to comply with the following Conditions of Approval may result in a Notice of Incidents of Noncompliance (INC) in accordance with 43 CFR 3163.1.

1. Plugging operations shall commence within **ninety (90)** days from the approval date of this Notice of Intent to Abandon.

If you are unable to plug the well by the 90th day provide this office, prior to the 90th day, with the reason for not meeting the deadline and a date when we can expect the well to be plugged. Failure to do so will result in enforcement action.

The rig used for the plugging procedure cannot be released and moved off without the prior approval of the authorized officer. Failure to do so may result in enforcement action.

2. **Notification:** Contact the appropriate BLM office at least 24 hours prior to the commencing of any plugging operations. For wells in Chaves and Roosevelt County, call 575-627-0272; Eddy County, call 575-361-2822; Lea County, call 575-393-3612.

3. **Blowout Preventers:** A blowout preventer (BOP), as appropriate, shall be installed before commencing any plugging operation. The BOP must be installed and maintained as per API and manufacturer recommendations. The minimum BOP requirement is a 2M system for a well not deeper than 9,090 feet; a 3M system for a well not deeper than 13,636 feet; and a 5M system for a well not deeper than 22,727 feet.

4. **Mud Requirement:** Mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of brine water. Minimum nine (9) pounds per gallon.

5. **Cement Requirement:** Sufficient cement shall be used to bring any required plug to the specified depth and length. Any given cement volumes on the proposed plugging procedure are merely estimates and are not final. Unless specific approval is received, no plug except the surface plug shall be less than 25 sacks of cement. Any plug that requires a tag will have a minimum WOC time of 4 hours.

In lieu of a cement plug across perforations in a cased hole (not for any other plugs), a bridge plug set within 50 feet to 100 feet above the perforations shall be capped with 25 sacks of cement. If a bailer is used to cap this plug, 35 feet of cement shall be sufficient. **Before pumping or bailing cement on top of CIBP, tag will be required to verify depth. Based on depth, a tag of the cement may be deemed necessary.**

Unless otherwise specified in the approved procedure, the cement plug shall consist of either Neat Class "C", for up to 7,500 feet of depth or Neat Class "H", for deeper than 7,500 feet plugs.

6. Dry Hole Marker: All casing shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). **The BLM is to be notified a minimum of 4 hours prior to the wellhead being cut off to verify that cement is to surface in the casing and all annuluses. Wellhead cut off shall commence within ten (10) calendar days of the well being plugged. If the cut off cannot be done by the 10th day, the BLM is to be contacted with justification to receive an extension for completing the cut off.**

The well bore shall then be capped with a 4-inch pipe, 10-feet in length, 4 feet above ground and embedded in cement, unless otherwise noted in COA (requirements will be attached). The following information shall be permanently inscribed on the dry hole marker: well name and number, name of the operator, lease serial number, surveyed location (quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer such as metes and bounds).

7. Subsequent Plugging Reporting: Within 30 days after plugging work is completed, file one original and three copies of the Subsequent Report of Abandonment, Form 3160-5 to BLM. The report should give in detail the manner in which the plugging work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. **Show date well was plugged.**

8. Trash: All trash, junk and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

Following the submission and approval of the Subsequent Report of Abandonment, surface restoration will be required. See attached reclamation objectives.