WPX Energy

Eddy County, New Mexico NAD 83
RDX Federal Com 17 Pad
RDX Federal Com 17-36H
API: 30-015-43636
Wellbore #1

Plan: Plan #1

Standard Planning Report

05 June, 2017

Scientific Drilling

Database:	Midland District	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Company:	WPX Energy	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site:	RDX Federal Com 17 Pad	**North Reference:**	Grid
Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	Eddy County, New Mexico NAD 83		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	RDX Federal Com 17 Pad				
Site Position:		**Northing:**	381,922.50 usft	**Latitude:**	32° 2' 57.397 N
From:	Map	**Easting:**	672,606.20 usft	**Longitude:**	103° 54' 34.720 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.22 °

Well	RDX Federal Com 17-36H					
Well Position	**+N/-S**	0.00 usft	**Northing:**	381,922.50 usft	**Latitude:**	32° 2' 57.397 N
	+E/-W	0.00 usft	**Easting:**	672,606.20 usft	**Longitude:**	103° 54' 34.720 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,071.00 usft

Wellbore	*Wellbore #1*				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM	5/25/2017	6.93	59.78	48,023

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (bearing)**	
	0.00	0.00	0.00	179.84	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,150.00	3.00	0.00	2,149.93	3.93	0.00	2.00	2.00	0.00	0.00	
2,375.00	3.00	0.00	2,374.62	15.70	0.00	0.00	0.00	0.00	0.00	
2,711.20	7.21	68.63	2,709.65	32.21	19.68	2.00	1.25	20.41	93.05	
5,161.26	7.21	68.63	5,140.32	144.29	306.14	0.00	0.00	0.00	0.00	
5,521.89	0.00	0.00	5,500.00	152.55	327.25	2.00	-2.00	0.00	180.00	
10,439.43	0.00	0.00	10,417.54	152.55	327.25	0.00	0.00	0.00	0.00	
11,189.43	90.00	179.84	10,895.01	-324.91	328.59	12.00	12.00	23.98	179.84	
15,746.64	90.00	179.84	10,895.00	-4,882.10	341.40	0.00	0.00	0.00	0.00	RDX36H BHL

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Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,500.00	7.21	68.63	4,484.29	114.04	228.82	-113.40	0.00	0.00	0.00
4,534.98	7.21	68.63	4,519.00	115.64	232.91	-114.99	0.00	0.00	0.00
Cherry Canyon									
4,600.00	7.21	68.63	4,583.50	118.61	240.52	-117.94	0.00	0.00	0.00
4,688.20	7.21	68.63	4,671.00	122.65	250.83	-121.95	0.00	0.00	0.00
Brushy Canyon									
4,700.00	7.21	68.63	4,682.71	123.19	252.21	-122.48	0.00	0.00	0.00
4,800.00	7.21	68.63	4,781.92	127.76	263.90	-127.03	0.00	0.00	0.00
4,900.00	7.21	68.63	4,881.13	132.34	275.59	-131.57	0.00	0.00	0.00
5,000.00	7.21	68.63	4,980.34	136.91	287.28	-136.11	0.00	0.00	0.00
5,100.00	7.21	68.63	5,079.54	141.49	298.98	-140.65	0.00	0.00	0.00
5,161.26	7.21	68.63	5,140.32	144.29	306.14	-143.43	0.00	0.00	0.00
Start Drop -2.00									
5,200.00	6.44	68.63	5,178.79	145.97	310.43	-145.10	2.00	-2.00	0.00
5,300.00	4.44	68.63	5,278.33	149.42	319.25	-148.53	2.00	-2.00	0.00
5,400.00	2.44	68.63	5,378.15	151.61	324.84	-150.70	2.00	-2.00	0.00
5,500.00	0.44	68.63	5,478.11	152.52	327.17	-151.61	2.00	-2.00	0.00
5,521.89	0.00	0.00	5,500.00	152.55	327.25	-151.64	2.00	-2.00	0.00
Start 4917.57 hold at 5521.89 MD									
5,600.00	0.00	0.00	5,578.11	152.55	327.25	-151.64	0.00	0.00	0.00
5,700.00	0.00	0.00	5,678.11	152.55	327.25	-151.64	0.00	0.00	0.00
5,800.00	0.00	0.00	5,778.11	152.55	327.25	-151.64	0.00	0.00	0.00
5,900.00	0.00	0.00	5,878.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,000.00	0.00	0.00	5,978.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,100.00	0.00	0.00	6,078.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,200.00	0.00	0.00	6,178.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,300.00	0.00	0.00	6,278.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,400.00	0.00	0.00	6,378.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,500.00	0.00	0.00	6,478.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,600.00	0.00	0.00	6,578.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,700.00	0.00	0.00	6,678.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,800.00	0.00	0.00	6,778.11	152.55	327.25	-151.64	0.00	0.00	0.00
6,900.00	0.00	0.00	6,878.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,000.00	0.00	0.00	6,978.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,100.00	0.00	0.00	7,078.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,200.00	0.00	0.00	7,178.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,261.89	0.00	0.00	7,240.00	152.55	327.25	-151.64	0.00	0.00	0.00
Bone Spring									
7,300.00	0.00	0.00	7,278.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,397.89	0.00	0.00	7,376.00	152.55	327.25	-151.64	0.00	0.00	0.00
Avalon									
7,400.00	0.00	0.00	7,378.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,500.00	0.00	0.00	7,478.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,600.00	0.00	0.00	7,578.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,700.00	0.00	0.00	7,678.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,800.00	0.00	0.00	7,778.11	152.55	327.25	-151.64	0.00	0.00	0.00
7,900.00	0.00	0.00	7,878.11	152.55	327.25	-151.64	0.00	0.00	0.00
8,000.00	0.00	0.00	7,978.11	152.55	327.25	-151.64	0.00	0.00	0.00
8,100.00	0.00	0.00	8,078.11	152.55	327.25	-151.64	0.00	0.00	0.00
8,167.89	0.00	0.00	8,146.00	152.55	327.25	-151.64	0.00	0.00	0.00
1st Bone Spring Sand									
8,200.00	0.00	0.00	8,178.11	152.55	327.25	-151.64	0.00	0.00	0.00
8,300.00	0.00	0.00	8,278.11	152.55	327.25	-151.64	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,758.01	38.23	179.84	10,713.00	50.15	327.54	-49.24	12.00	12.00	0.00
Wolfcamp A2									
10,775.00	40.27	179.84	10,726.16	39.40	327.57	-38.49	12.00	12.00	0.00
10,800.00	43.27	179.84	10,744.80	22.75	327.61	-21.84	12.00	12.00	0.00
10,825.00	46.27	179.84	10,762.55	5.15	327.66	-4.23	12.00	12.00	0.00
10,850.00	49.27	179.84	10,779.35	-13.36	327.72	14.27	12.00	12.00	0.00
10,875.00	52.27	179.84	10,795.16	-32.72	327.77	33.64	12.00	12.00	0.00
10,900.00	55.27	179.84	10,809.93	-52.89	327.83	53.80	12.00	12.00	0.00
10,925.00	58.27	179.84	10,823.63	-73.79	327.89	74.71	12.00	12.00	0.00
10,950.00	61.27	179.84	10,836.22	-95.39	327.95	96.31	12.00	12.00	0.00
10,975.00	64.27	179.84	10,847.66	-117.62	328.01	118.53	12.00	12.00	0.00
11,000.00	67.27	179.84	10,857.92	-140.41	328.07	141.33	12.00	12.00	0.00
11,025.00	70.27	179.84	10,866.97	-163.71	328.14	164.63	12.00	12.00	0.00
11,050.00	73.27	179.84	10,874.79	-187.46	328.21	188.37	12.00	12.00	0.00
11,075.00	76.27	179.84	10,881.36	-211.57	328.27	212.49	12.00	12.00	0.00
11,100.00	79.27	179.84	10,886.65	-236.00	328.34	236.92	12.00	12.00	0.00
11,107.54	80.17	179.84	10,888.00	-243.43	328.36	244.34	12.00	12.00	0.00
Top Target									
11,125.00	82.27	179.84	10,890.66	-260.68	328.41	261.59	12.00	12.00	0.00
11,150.00	85.27	179.84	10,893.38	-285.53	328.48	286.44	12.00	12.00	0.00
11,175.00	88.27	179.84	10,894.79	-310.48	328.55	311.40	12.00	12.00	0.00
11,189.43	90.00	179.84	10,895.01	-324.91	328.59	325.83	12.00	12.00	0.00
11,194.92	90.00	179.84	10,895.01	-330.40	328.61	331.31	0.00	0.00	0.00
Start 4552.05 hold at 11194.92 MD									
11,200.00	90.00	179.84	10,895.01	-335.48	328.62	336.40	0.00	0.00	0.00
11,300.00	90.00	179.84	10,895.00	-435.48	328.90	436.40	0.00	0.00	0.00
11,400.00	90.00	179.84	10,895.00	-535.48	329.18	536.40	0.00	0.00	0.00
11,500.00	90.00	179.84	10,895.00	-635.48	329.46	636.40	0.00	0.00	0.00
11,600.00	90.00	179.84	10,895.00	-735.48	329.75	736.40	0.00	0.00	0.00
11,700.00	90.00	179.84	10,895.00	-835.48	330.03	836.40	0.00	0.00	0.00
11,800.00	90.00	179.84	10,895.00	-935.48	330.31	936.40	0.00	0.00	0.00
11,900.00	90.00	179.84	10,895.00	-1,035.48	330.59	1,036.40	0.00	0.00	0.00
12,000.00	90.00	179.84	10,895.00	-1,135.48	330.87	1,136.40	0.00	0.00	0.00
12,100.00	90.00	179.84	10,895.00	-1,235.48	331.15	1,236.40	0.00	0.00	0.00
12,200.00	90.00	179.84	10,895.00	-1,335.48	331.43	1,336.40	0.00	0.00	0.00
12,300.00	90.00	179.84	10,895.00	-1,435.48	331.71	1,436.40	0.00	0.00	0.00
12,400.00	90.00	179.84	10,895.00	-1,535.48	331.99	1,536.40	0.00	0.00	0.00
12,500.00	90.00	179.84	10,895.00	-1,635.48	332.28	1,636.40	0.00	0.00	0.00
12,600.00	90.00	179.84	10,895.00	-1,735.48	332.56	1,736.40	0.00	0.00	0.00
12,700.00	90.00	179.84	10,895.00	-1,835.48	332.84	1,836.40	0.00	0.00	0.00
12,800.00	90.00	179.84	10,895.00	-1,935.47	333.12	1,936.40	0.00	0.00	0.00
12,900.00	90.00	179.84	10,895.00	-2,035.47	333.40	2,036.40	0.00	0.00	0.00
13,000.00	90.00	179.84	10,895.00	-2,135.47	333.68	2,136.40	0.00	0.00	0.00
13,100.00	90.00	179.84	10,895.00	-2,235.47	333.96	2,236.40	0.00	0.00	0.00
13,200.00	90.00	179.84	10,895.00	-2,335.47	334.24	2,336.40	0.00	0.00	0.00
13,300.00	90.00	179.84	10,895.00	-2,435.47	334.52	2,436.40	0.00	0.00	0.00
13,400.00	90.00	179.84	10,895.00	-2,535.47	334.80	2,536.40	0.00	0.00	0.00
13,500.00	90.00	179.84	10,895.00	-2,635.47	335.09	2,636.40	0.00	0.00	0.00
13,600.00	90.00	179.84	10,895.00	-2,735.47	335.37	2,736.40	0.00	0.00	0.00
13,700.00	90.00	179.84	10,895.00	-2,835.47	335.65	2,836.40	0.00	0.00	0.00
13,800.00	90.00	179.84	10,895.00	-2,935.47	335.93	2,936.40	0.00	0.00	0.00
13,900.00	90.00	179.84	10,895.00	-3,035.47	336.21	3,036.40	0.00	0.00	0.00
14,000.00	90.00	179.84	10,895.00	-3,135.47	336.49	3,136.40	0.00	0.00	0.00

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Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)
3,402.02	3,395.00	Bell Canyon (Base of Salt)			
4,534.98	4,519.00	Cherry Canyon			
4,688.20	4,671.00	Brushy Canyon			
7,261.89	7,240.00	Bone Spring			
7,397.89	7,376.00	Avalon			
8,167.89	8,146.00	1st Bone Spring Sand			
8,566.89	8,545.00	2nd Bone Spring Lime			
8,982.89	8,961.00	2nd Bone Spring Sand			
9,436.89	9,415.00	3rd Bone Spring Lime			
10,080.89	10,059.00	3rd Bone Spring Sand			
10,471.92	10,450.00	Wolfcamp Top			
10,495.02	10,473.00	WC_X			
10,590.39	10,566.00	WC_Y			
10,620.18	10,594.00	Wolfcamp A			
10,758.01	10,713.00	Wolfcamp A2			
11,107.54	10,888.00	Top Target			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000.00	2,000.00	0.00	0.00	Start Build 2.00
2,150.00	2,149.93	3.93	0.00	Start 225.00 hold at 2150.00 MD
2,375.00	2,374.62	15.70	0.00	Start DLS 2.00 TFO 93.05
2,711.20	2,709.65	32.21	19.68	Start 2450.06 hold at 2711.20 MD
5,161.26	5,140.32	144.29	306.14	Start Drop -2.00
5,521.89	5,500.00	152.55	327.25	Start 4917.57 hold at 5521.89 MD
10,439.46	10,417.57	152.55	327.25	Start DLS 12.00 TFO 179.84
11,194.92	10,895.00	-330.37	328.61	Start 4552.05 hold at 11194.92 MD
15,746.96	10,843.00	-4,882.10	341.40	TD at 15746.96

WPX Energy

Eddy County, New Mexico NAD 83
RDX Federal Com 17 Pad
RDX Federal Com 17-36H
API: 30-015-43636
Wellbore #1
Plan #1

Anticollision Report

05 June, 2017

Scientific Drilling

Scientific Drilling Int.

Anticollision Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.98 usft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 6/5/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,746.64	Plan #1 (Wellbore #1)	MWD+HDGM	OWSG MWD + HDGM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
RDX Federal Com 17 Pad						
RDX Fed. 17-12H - Wellbore #1 - As Drilled	952.56	949.59	148.69	142.31	23.323	CC
RDX Fed. 17-12H - Wellbore #1 - As Drilled	2,000.00	1,995.87	151.63	137.81	10.970	ES
RDX Fed. 17-12H - Wellbore #1 - As Drilled	7,200.00	7,124.00	510.57	460.26	10.148	SF
RDX Fed. 17-14 - Wellbore #1 - As Drilled	8,100.00	7,398.00	4,365.66	4,272.11	46.668	SF
RDX Fed. 17-14 - Wellbore #1 - As Drilled	14,983.91	7,398.00	3,548.64	3,492.78	63.529	CC
RDX Fed. 17-14 - Wellbore #1 - As Drilled	15,000.00	7,398.00	3,548.68	3,492.70	63.397	ES
RDX Fed. 17-16H - Wellbore #1 - As Drilled	0.00	0.00	187.90			
RDX Fed. 17-16H - Wellbore #1 - As Drilled	900.00	897.72	188.54	182.61	31.790	ES
RDX Fed. 17-16H - Wellbore #1 - As Drilled	15,746.64	14,820.00	616.74	454.59	3.803	SF
RDX Fed. 17-25H - Wellbore #1 - As Drilled	2,480.81	2,476.99	60.24	43.27	3.550	CC
RDX Fed. 17-25H - Wellbore #1 - As Drilled	2,500.00	2,496.10	60.32	43.21	3.527	ES, SF
RDX Fed. Com 17-35H - Wellbore #1 - As Drilled	1,912.88	1,911.99	20.10	7.09	1.545	CC, ES, SF
RDX Fed. Com 17-35H - Wellbore #1 - Gyro Data Plan 5	2,000.00	1,999.00	25.10	11.20	1.806	CC, ES, SF
RDX Federal Com 17-37H - Wellbore #1 - Plan #1	2,000.00	2,000.00	24.80	10.90	1.784	CC, ES, SF

Offset Design RDX Federal Com 17 Pad - RDX Fed. 17-12H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

Survey Program: 100-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-150.02	-130.00	-75.00	150.11				
100.00	100.00	97.07	97.07	0.14	0.14	-149.86	-129.78	-75.34	150.06	149.79	0.28	544.646	
141.98	141.98	138.99	138.98	0.29	0.28	-149.74	-129.60	-75.63	150.05	149.48	0.57	263.111	
200.00	200.00	196.91	196.90	0.50	0.49	-149.58	-129.42	-75.98	150.07	149.09	0.99	152.271	
300.00	300.00	296.95	296.94	0.85	0.85	-149.38	-129.19	-76.47	150.12	148.42	1.70	88.173	
400.00	400.00	397.20	397.20	1.21	1.21	-149.13	-128.82	-77.01	150.08	147.66	2.42	62.008	
500.00	500.00	497.44	497.43	1.57	1.57	-148.81	-128.21	-77.61	149.87	146.73	3.14	47.766	
600.00	600.00	597.46	597.44	1.93	1.92	-148.48	-127.51	-78.20	149.58	145.73	3.85	38.811	
700.00	700.00	697.38	697.36	2.29	2.28	-148.13	-126.80	-78.83	149.31	144.74	4.57	32.668	
800.00	800.00	797.49	797.46	2.65	2.64	-147.83	-126.16	-79.34	149.04	143.75	5.29	28.187	
900.00	900.00	897.39	897.37	3.01	3.00	-147.65	-125.67	-79.60	148.76	142.75	6.00	24.783	
952.56	952.56	949.59	949.56	3.19	3.18	-147.59	-125.53	-79.69	148.69	142.31	6.38	23.323	CC
1,000.00	1,000.00	996.68	996.65	3.36	3.35	-147.55	-125.52	-79.81	148.74	142.03	6.71	22.163	
1,100.00	1,100.00	1,096.70	1,096.67	3.72	3.70	-147.44	-125.56	-80.18	148.98	141.56	7.42	20.071	

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

Scientific Drilling Int.

Anticollision Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. 17-12H - Wellbore #1 - As Drilled

Offset Site Error: 0.00 usft

Survey Program: 100-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,400.00	6,378.11	6,369.63	6,368.78	23.05	22.16	-130.81	-173.23	-49.98	498.48	453.68	44.80	11.127	
6,500.00	6,478.11	6,470.39	6,469.54	23.39	22.52	-130.88	-174.43	-50.52	499.65	454.15	45.51	10.979	
6,600.00	6,578.11	6,570.64	6,569.78	23.74	22.88	-130.95	-175.59	-50.95	500.74	454.52	46.22	10.834	
6,700.00	6,678.11	6,671.36	6,670.49	24.09	23.24	-131.03	-176.79	-51.25	501.75	454.82	46.93	10.691	
6,800.00	6,778.11	6,771.50	6,770.62	24.44	23.59	-131.12	-178.01	-51.36	502.63	454.99	47.64	10.551	
6,900.00	6,878.11	6,872.40	6,871.52	24.79	23.95	-131.23	-179.28	-51.37	503.46	455.11	48.35	10.412	
7,000.00	6,978.11	6,973.16	6,972.27	25.14	24.31	-131.33	-180.36	-51.26	504.09	455.02	49.07	10.274	
7,100.00	7,078.11	7,065.99	7,065.10	25.49	24.64	-131.43	-181.47	-51.27	504.92	455.17	49.75	10.149	
7,200.00	7,178.11	7,124.00	7,122.95	25.84	24.85	-131.69	-185.26	-52.03	510.57	460.26	50.31	10.148 SF	
7,300.00	7,278.11	7,186.00	7,184.08	26.19	25.08	-132.32	-195.14	-54.54	524.34	473.45	50.89	10.303	
7,400.00	7,378.11	7,241.66	7,237.94	26.54	25.28	-133.15	-208.68	-58.10	545.70	494.26	51.45	10.607	
7,500.00	7,478.11	7,289.49	7,282.88	26.89	25.45	-134.09	-224.52	-61.96	575.00	523.02	51.97	11.063	
7,600.00	7,578.11	7,344.00	7,332.38	27.24	25.66	-135.27	-246.48	-68.07	611.90	559.38	52.52	11.651	
7,700.00	7,678.11	7,411.87	7,392.17	27.59	25.92	-136.93	-277.77	-75.07	653.52	600.43	53.10	12.308	
7,800.00	7,778.11	7,469.00	7,440.26	27.94	26.14	-138.74	-308.48	-77.19	698.74	645.10	53.64	13.026	
7,900.00	7,878.11	7,521.89	7,482.57	28.29	26.36	-140.61	-340.21	-77.30	748.70	694.53	54.17	13.821	
8,000.00	7,978.11	7,564.00	7,514.80	28.65	26.54	-142.12	-367.30	-77.19	803.55	748.90	54.66	14.701	
8,100.00	8,078.11	7,594.00	7,536.43	29.00	26.67	-143.23	-388.07	-76.75	863.52	808.41	55.11	15.670	
8,200.00	8,178.11	7,626.00	7,557.92	29.35	26.81	-144.45	-411.76	-75.98	928.42	872.87	55.56	16.712	
8,300.00	8,278.11	7,639.94	7,566.75	29.70	26.87	-144.99	-422.54	-75.59	997.39	941.44	55.95	17.827	
8,400.00	8,378.11	7,657.00	7,577.07	30.05	26.95	-145.65	-436.12	-75.14	1,070.19	1,013.84	56.35	18.992	
8,500.00	8,478.11	7,676.57	7,588.29	30.41	27.04	-146.39	-452.15	-74.68	1,146.16	1,089.40	56.76	20.195	
8,600.00	8,578.11	7,689.00	7,595.07	30.76	27.10	-146.85	-462.56	-74.45	1,224.82	1,167.68	57.14	21.435	
8,700.00	8,678.11	7,709.49	7,605.75	31.11	27.20	-147.60	-480.04	-74.16	1,305.69	1,248.15	57.54	22.690	
8,800.00	8,778.11	7,721.00	7,611.48	31.46	27.26	-148.01	-490.02	-74.07	1,388.52	1,330.59	57.92	23.971	
8,900.00	8,878.11	7,736.79	7,618.99	31.82	27.34	-148.57	-503.91	-73.98	1,473.01	1,414.69	58.31	25.260	
9,000.00	8,978.11	7,752.00	7,625.82	32.17	27.41	-149.09	-517.50	-73.92	1,559.00	1,500.30	58.70	26.559	
9,100.00	9,078.11	7,752.00	7,625.82	32.52	27.41	-149.09	-517.50	-73.92	1,646.32	1,587.26	59.05	27.878	
9,200.00	9,178.11	7,769.63	7,633.24	32.88	27.51	-149.68	-533.50	-73.89	1,734.63	1,675.19	59.44	29.181	
9,300.00	9,278.11	7,783.00	7,638.52	33.23	27.57	-150.13	-545.78	-73.90	1,824.00	1,764.18	59.82	30.490	
9,400.00	9,378.11	7,783.00	7,638.52	33.58	27.57	-150.13	-545.78	-73.90	1,914.24	1,854.06	60.18	31.810	
9,500.00	9,478.11	7,783.00	7,638.52	33.94	27.57	-150.13	-545.78	-73.90	2,005.40	1,944.86	60.53	33.129	
9,600.00	9,578.11	7,800.41	7,644.88	34.29	27.67	-150.69	-561.98	-73.87	2,096.95	2,036.04	60.92	34.423	
9,700.00	9,678.11	7,815.00	7,649.70	34.64	27.74	-151.16	-575.75	-73.77	2,189.41	2,128.11	61.30	35.718	
9,800.00	9,778.11	7,815.00	7,649.70	35.00	27.74	-151.16	-575.75	-73.77	2,282.23	2,220.58	61.65	37.018	
9,900.00	9,878.11	7,815.00	7,649.70	35.35	27.74	-151.16	-575.75	-73.77	2,375.64	2,313.63	62.01	38.312	
10,000.00	9,978.11	7,815.00	7,649.70	35.71	27.74	-151.16	-575.75	-73.77	2,469.56	2,407.20	62.36	39.600	
10,100.00	10,078.11	7,815.00	7,649.70	36.06	27.74	-151.16	-575.75	-73.77	2,563.95	2,501.23	62.72	40.881	
10,200.00	10,178.11	7,830.76	7,654.38	36.42	27.83	-151.67	-590.80	-73.50	2,658.43	2,595.33	63.10	42.133	
10,300.00	10,278.11	7,846.00	7,658.38	36.77	27.91	-152.16	-605.50	-73.03	2,753.57	2,690.10	63.47	43.382	
10,400.00	10,378.11	7,846.00	7,658.38	37.12	27.91	-152.16	-605.50	-73.03	2,848.77	2,784.94	63.83	44.632	
10,500.00	10,477.95	7,846.00	7,658.38	37.46	27.91	20.04	-605.50	-73.03	2,943.15	2,879.45	63.71	46.199	
10,600.00	10,575.10	7,846.00	7,658.38	37.76	27.91	13.70	-605.50	-73.03	3,030.66	2,969.16	61.50	49.280	
10,700.00	10,665.37	7,846.00	7,658.38	38.02	27.91	10.62	-605.50	-73.03	3,107.84	3,050.80	57.03	54.494	
10,800.00	10,744.80	7,878.00	7,664.92	38.23	28.09	8.81	-636.77	-71.50	3,171.98	3,121.33	50.65	62.622	
10,900.00	10,809.93	7,878.00	7,664.92	38.38	28.09	7.83	-636.77	-71.50	3,220.66	3,177.83	42.83	75.194	
11,000.00	10,857.92	7,878.00	7,664.92	38.49	28.09	7.29	-636.77	-71.50	3,253.02	3,218.46	34.56	94.119	
11,100.00	10,886.65	7,910.00	7,669.29	38.65	28.27	7.03	-668.41	-69.54	3,267.63	3,239.98	27.65	118.178	
11,200.00	10,895.01	7,920.86	7,670.42	38.84	28.33	7.05	-679.19	-68.87	3,264.16	3,239.31	24.85	131.359	
11,300.00	10,895.00	7,934.00	7,671.63	39.06	28.41	7.04	-692.25	-68.14	3,254.90	3,229.85	25.06	129.906	
11,400.00	10,895.00	7,966.00	7,673.75	39.33	28.60	7.02	-724.14	-66.58	3,247.98	3,222.62	25.36	128.090	
11,500.00	10,895.00	7,980.72	7,674.29	39.65	28.69	7.01	-738.84	-65.91	3,243.56	3,217.91	25.65	126.477	

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

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. 17-14 - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

Survey Program: 7398-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	3.00	3.00	0.00	0.03	167.34	-4,117.73	924.78	4,220.30				
100.00	100.00	103.00	103.00	0.14	0.90	167.34	-4,117.73	924.78	4,220.30	4,219.26	1.04	4,069.506	
200.00	200.00	203.00	203.00	0.50	1.77	167.34	-4,117.73	924.78	4,220.30	4,218.03	2.27	1,860.647	
300.00	300.00	303.00	303.00	0.85	2.64	167.34	-4,117.73	924.78	4,220.30	4,216.80	3.50	1,206.033	
400.00	400.00	403.00	403.00	1.21	3.52	167.34	-4,117.73	924.78	4,220.30	4,215.56	4.73	892.154	
500.00	500.00	503.00	503.00	1.57	4.39	167.34	-4,117.73	924.78	4,220.30	4,214.33	5.96	707.915	
600.00	600.00	603.00	603.00	1.93	5.26	167.34	-4,117.73	924.78	4,220.30	4,213.10	7.19	586.745	
700.00	700.00	703.00	703.00	2.29	6.14	167.34	-4,117.73	924.78	4,220.30	4,211.87	8.42	500.993	
800.00	800.00	803.00	803.00	2.65	7.01	167.34	-4,117.73	924.78	4,220.30	4,210.64	9.65	437.110	
900.00	900.00	903.00	903.00	3.01	7.88	167.34	-4,117.73	924.78	4,220.30	4,209.41	10.89	387.677	
1,000.00	1,000.00	1,003.00	1,003.00	3.36	8.75	167.34	-4,117.73	924.78	4,220.30	4,208.18	12.12	348.288	
1,100.00	1,100.00	1,103.00	1,103.00	3.72	9.63	167.34	-4,117.73	924.78	4,220.30	4,206.95	13.35	316.165	
1,200.00	1,200.00	1,203.00	1,203.00	4.08	10.50	167.34	-4,117.73	924.78	4,220.30	4,205.72	14.58	289.467	
1,300.00	1,300.00	1,303.00	1,303.00	4.44	11.37	167.34	-4,117.73	924.78	4,220.30	4,204.48	15.81	266.927	
1,400.00	1,400.00	1,403.00	1,403.00	4.80	12.24	167.34	-4,117.73	924.78	4,220.30	4,203.25	17.04	247.644	
1,500.00	1,500.00	1,503.00	1,503.00	5.16	13.12	167.34	-4,117.73	924.78	4,220.30	4,202.02	18.27	230.959	
1,600.00	1,600.00	1,603.00	1,603.00	5.52	13.99	167.34	-4,117.73	924.78	4,220.30	4,200.79	19.50	216.380	
1,700.00	1,700.00	1,703.00	1,703.00	5.87	14.86	167.34	-4,117.73	924.78	4,220.30	4,199.56	20.74	203.533	
1,800.00	1,800.00	1,803.00	1,803.00	6.23	15.73	167.34	-4,117.73	924.78	4,220.30	4,198.33	21.97	192.126	
1,900.00	1,900.00	1,903.00	1,903.00	6.59	16.61	167.34	-4,117.73	924.78	4,220.30	4,197.10	23.20	181.929	
2,000.00	2,000.00	2,003.00	2,003.00	6.95	17.48	167.34	-4,117.73	924.78	4,220.30	4,195.87	24.43	172.760	
2,100.00	2,099.98	2,102.98	2,102.98	7.31	18.35	167.34	-4,117.73	924.78	4,222.00	4,196.35	25.65	164.629	
2,200.00	2,199.86	2,202.86	2,202.86	7.67	19.22	167.34	-4,117.73	924.78	4,226.68	4,199.82	26.86	157.380	
2,300.00	2,299.73	2,302.73	2,302.73	8.02	20.10	167.36	-4,117.73	924.78	4,231.79	4,203.70	28.09	150.677	
2,400.00	2,399.59	2,402.59	2,402.59	8.38	20.97	167.83	-4,117.73	924.78	4,236.86	4,207.55	29.32	144.518	
2,500.00	2,499.42	2,502.42	2,502.42	8.74	21.84	126.30	-4,117.73	924.78	4,241.26	4,210.71	30.56	138.805	
2,600.00	2,599.11	2,602.11	2,602.11	9.09	22.71	108.96	-4,117.73	924.78	4,244.73	4,212.94	31.79	133.531	
2,700.00	2,698.53	2,701.53	2,701.53	9.45	23.58	99.74	-4,117.73	924.78	4,247.26	4,214.25	33.02	128.643	
2,800.00	2,797.74	2,800.74	2,800.74	9.80	24.44	99.14	-4,117.73	924.78	4,249.26	4,215.02	34.24	124.110	
2,900.00	2,896.95	2,899.95	2,899.95	10.16	25.31	99.31	-4,117.73	924.78	4,251.29	4,215.83	35.46	119.883	
3,000.00	2,996.16	2,999.16	2,999.16	10.52	26.17	99.47	-4,117.73	924.78	4,253.35	4,216.66	36.69	115.930	
3,100.00	3,095.37	3,098.37	3,098.37	10.89	27.04	99.64	-4,117.73	924.78	4,255.45	4,217.54	37.92	112.227	
3,200.00	3,194.58	3,197.58	3,197.58	11.25	27.90	99.80	-4,117.73	924.78	4,257.59	4,218.44	39.15	108.751	
3,300.00	3,293.79	3,296.79	3,296.79	11.62	28.77	99.97	-4,117.73	924.78	4,259.76	4,219.38	40.38	105.483	
3,400.00	3,393.00	3,396.00	3,396.00	11.99	29.64	100.13	-4,117.73	924.78	4,261.97	4,220.35	41.62	102.406	
3,500.00	3,492.21	3,495.21	3,495.21	12.36	30.50	100.30	-4,117.73	924.78	4,264.22	4,221.36	42.86	99.503	
3,600.00	3,591.41	3,594.41	3,594.41	12.74	31.37	100.46	-4,117.73	924.78	4,266.50	4,222.40	44.09	96.760	
3,700.00	3,690.62	3,693.62	3,693.62	13.11	32.23	100.63	-4,117.73	924.78	4,268.81	4,223.48	45.33	94.165	
3,800.00	3,789.83	3,792.83	3,792.83	13.49	33.10	100.79	-4,117.73	924.78	4,271.16	4,224.59	46.57	91.707	
3,900.00	3,889.04	3,892.04	3,892.04	13.86	33.96	100.96	-4,117.73	924.78	4,273.55	4,225.73	47.82	89.375	
4,000.00	3,988.25	3,991.25	3,991.25	14.24	34.83	101.12	-4,117.73	924.78	4,275.97	4,226.91	49.06	87.161	
4,100.00	4,087.46	4,090.46	4,090.46	14.62	35.70	101.28	-4,117.73	924.78	4,278.43	4,228.13	50.30	85.054	
4,200.00	4,186.67	4,189.67	4,189.67	15.00	36.56	101.45	-4,117.73	924.78	4,280.92	4,229.38	51.55	83.049	
4,300.00	4,285.88	4,288.88	4,288.88	15.38	37.43	101.61	-4,117.73	924.78	4,283.45	4,230.66	52.79	81.138	
4,400.00	4,385.08	4,388.08	4,388.08	15.76	38.29	101.77	-4,117.73	924.78	4,286.01	4,231.98	54.04	79.314	
4,500.00	4,484.29	4,487.29	4,487.29	16.15	39.16	101.94	-4,117.73	924.78	4,288.61	4,233.33	55.29	77.573	
4,600.00	4,583.50	4,586.50	4,586.50	16.53	40.02	102.10	-4,117.73	924.78	4,291.25	4,234.72	56.53	75.908	
4,700.00	4,682.71	4,685.71	4,685.71	16.91	40.89	102.26	-4,117.73	924.78	4,293.92	4,236.14	57.78	74.314	
4,800.00	4,781.92	4,784.92	4,784.92	17.30	41.76	102.42	-4,117.73	924.78	4,296.62	4,237.59	59.03	72.788	
4,900.00	4,881.13	4,884.13	4,884.13	17.68	42.62	102.59	-4,117.73	924.78	4,299.36	4,239.08	60.28	71.326	
5,000.00	4,980.34	4,983.34	4,983.34	18.07	43.49	102.75	-4,117.73	924.78	4,302.14	4,240.61	61.53	69.923	
5,100.00	5,079.54	5,082.54	5,082.54	18.45	44.35	102.91	-4,117.73	924.78	4,304.94	4,242.17	62.78	68.575	

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

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	*0.00 usft*	***Output errors are at***	*2.00 sigma*
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. 17-14 - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

Survey Program: 7398-INC-ONLY — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	10,378.11	7,398.00	7,398.00	37.12	64.56	172.03	-4,117.73	924.78	5,243.21	5,141.53	101.68	51.568	
10,500.00	10,477.95	7,398.00	7,398.00	37.46	64.56	-7.22	-4,117.73	924.78	5,297.56	5,196.33	101.23	52.334	
10,600.00	10,575.10	7,398.00	7,398.00	37.76	64.56	-6.60	-4,117.73	924.78	5,336.44	5,239.39	97.05	54.989	
10,700.00	10,665.37	7,398.00	7,398.00	38.02	64.56	-6.32	-4,117.73	924.78	5,357.23	5,268.11	89.11	60.118	
10,800.00	10,744.80	7,398.00	7,398.00	38.23	64.56	-6.29	-4,117.73	924.78	5,359.23	5,281.28	77.95	68.753	
10,900.00	10,809.93	7,398.00	7,398.00	38.38	64.56	-6.52	-4,117.73	924.78	5,342.38	5,277.93	64.45	82.890	
11,000.00	10,857.92	7,398.00	7,398.00	38.49	64.56	-7.05	-4,117.73	924.78	5,307.25	5,257.09	50.16	105.801	
11,100.00	10,886.65	7,398.00	7,398.00	38.65	64.56	-8.02	-4,117.73	924.78	5,255.01	5,216.79	38.22	137.491	
11,200.00	10,895.01	7,398.00	7,398.00	38.84	64.56	-9.50	-4,117.73	924.78	5,187.56	5,152.73	34.83	148.932	
11,300.00	10,895.00	7,398.00	7,398.00	39.06	64.56	-9.50	-4,117.73	924.78	5,115.08	5,080.05	35.03	146.031	
11,400.00	10,895.00	7,398.00	7,398.00	39.33	64.56	-9.50	-4,117.73	924.78	5,043.54	5,008.28	35.26	143.049	
11,500.00	10,895.00	7,398.00	7,398.00	39.65	64.56	-9.50	-4,117.73	924.78	4,972.97	4,937.45	35.52	140.002	
11,600.00	10,895.00	7,398.00	7,398.00	40.02	64.56	-9.50	-4,117.73	924.78	4,903.44	4,867.62	35.82	136.905	
11,700.00	10,895.00	7,398.00	7,398.00	40.44	64.56	-9.50	-4,117.73	924.78	4,834.97	4,798.83	36.14	133.776	
11,800.00	10,895.00	7,398.00	7,398.00	40.90	64.56	-9.50	-4,117.73	924.78	4,767.61	4,731.12	36.50	130.630	
11,900.00	10,895.00	7,398.00	7,398.00	41.40	64.56	-9.50	-4,117.73	924.78	4,701.42	4,664.54	36.88	127.482	
12,000.00	10,895.00	7,398.00	7,398.00	41.96	64.56	-9.50	-4,117.73	924.78	4,636.44	4,599.15	37.29	124.345	
12,100.00	10,895.00	7,398.00	7,398.00	42.55	64.56	-9.50	-4,117.73	924.78	4,572.72	4,535.00	37.72	121.232	
12,200.00	10,895.00	7,398.00	7,398.00	43.18	64.56	-9.50	-4,117.73	924.78	4,510.32	4,472.15	38.17	118.154	
12,300.00	10,895.00	7,398.00	7,398.00	43.85	64.56	-9.50	-4,117.73	924.78	4,449.29	4,410.65	38.65	115.120	
12,400.00	10,895.00	7,398.00	7,398.00	44.56	64.56	-9.50	-4,117.73	924.78	4,389.70	4,350.55	39.14	112.140	
12,500.00	10,895.00	7,398.00	7,398.00	45.30	64.56	-9.50	-4,117.73	924.78	4,331.59	4,291.93	39.66	109.221	
12,600.00	10,895.00	7,398.00	7,398.00	46.08	64.56	-9.50	-4,117.73	924.78	4,275.03	4,234.84	40.19	106.369	
12,700.00	10,895.00	7,398.00	7,398.00	46.89	64.56	-9.50	-4,117.73	924.78	4,220.08	4,179.34	40.74	103.591	
12,800.00	10,895.00	7,398.00	7,398.00	47.73	64.56	-9.50	-4,117.73	924.78	4,166.81	4,125.51	41.30	100.891	
12,900.00	10,895.00	7,398.00	7,398.00	48.59	64.56	-9.50	-4,117.73	924.78	4,115.28	4,073.40	41.88	98.272	
13,000.00	10,895.00	7,398.00	7,398.00	49.49	64.56	-9.50	-4,117.73	924.78	4,065.56	4,023.09	42.47	95.737	
13,100.00	10,895.00	7,398.00	7,398.00	50.41	64.56	-9.50	-4,117.73	924.78	4,017.71	3,974.64	43.07	93.289	
13,200.00	10,895.00	7,398.00	7,398.00	51.35	64.56	-9.50	-4,117.73	924.78	3,971.80	3,928.12	43.68	90.930	
13,300.00	10,895.00	7,398.00	7,398.00	52.32	64.56	-9.50	-4,117.73	924.78	3,927.90	3,883.60	44.30	88.660	
13,400.00	10,895.00	7,398.00	7,398.00	53.31	64.56	-9.50	-4,117.73	924.78	3,886.08	3,841.14	44.94	86.481	
13,500.00	10,895.00	7,398.00	7,398.00	54.32	64.56	-9.50	-4,117.73	924.78	3,846.41	3,800.83	45.58	84.392	
13,600.00	10,895.00	7,398.00	7,398.00	55.35	64.56	-9.50	-4,117.73	924.78	3,808.94	3,762.72	46.23	82.395	
13,700.00	10,895.00	7,398.00	7,398.00	56.40	64.56	-9.50	-4,117.73	924.78	3,773.76	3,726.87	46.89	80.487	
13,800.00	10,895.00	7,398.00	7,398.00	57.46	64.56	-9.50	-4,117.73	924.78	3,740.92	3,693.37	47.55	78.670	
13,900.00	10,895.00	7,398.00	7,398.00	58.55	64.56	-9.50	-4,117.73	924.78	3,710.49	3,662.26	48.22	76.941	
14,000.00	10,895.00	7,398.00	7,398.00	59.64	64.56	-9.50	-4,117.73	924.78	3,682.52	3,633.61	48.90	75.301	
14,100.00	10,895.00	7,398.00	7,398.00	60.75	64.56	-9.50	-4,117.73	924.78	3,657.07	3,607.48	49.59	73.747	
14,200.00	10,895.00	7,398.00	7,398.00	61.88	64.56	-9.50	-4,117.73	924.78	3,634.19	3,583.91	50.28	72.279	
14,300.00	10,895.00	7,398.00	7,398.00	63.02	64.56	-9.50	-4,117.73	924.78	3,613.94	3,562.97	50.98	70.894	
14,400.00	10,895.00	7,398.00	7,398.00	64.17	64.56	-9.50	-4,117.73	924.78	3,596.36	3,544.68	51.68	69.592	
14,500.00	10,895.00	7,398.00	7,398.00	65.34	64.56	-9.50	-4,117.73	924.78	3,581.48	3,529.10	52.38	68.370	
14,600.00	10,895.00	7,398.00	7,398.00	66.51	64.56	-9.50	-4,117.73	924.78	3,569.35	3,516.25	53.09	67.227	
14,700.00	10,895.00	7,398.00	7,398.00	67.70	64.56	-9.50	-4,117.73	924.78	3,559.98	3,506.17	53.81	66.160	
14,800.00	10,895.00	7,398.00	7,398.00	68.89	64.56	-9.50	-4,117.73	924.78	3,553.40	3,498.87	54.53	65.167	
14,900.00	10,895.00	7,398.00	7,398.00	70.10	64.56	-9.50	-4,117.73	924.78	3,549.63	3,494.38	55.25	64.247	
14,983.91	10,895.00	7,398.00	7,398.00	71.12	64.56	-9.50	-4,117.73	924.78	3,548.64	3,492.78	55.86	63.529	CC
15,000.00	10,895.00	7,398.00	7,398.00	71.31	64.56	-9.50	-4,117.73	924.78	3,548.68	3,492.70	55.98	63.397	ES
15,100.00	10,895.00	7,398.00	7,398.00	72.53	64.56	-9.50	-4,117.73	924.78	3,550.54	3,493.83	56.70	62.615	
15,200.00	10,895.00	7,398.00	7,398.00	73.76	64.56	-9.50	-4,117.73	924.78	3,555.21	3,497.78	57.44	61.898	
15,300.00	10,895.00	7,398.00	7,398.00	75.00	64.56	-9.50	-4,117.73	924.78	3,562.69	3,504.52	58.17	61.244	
15,400.00	10,895.00	7,398.00	7,398.00	76.25	64.56	-9.50	-4,117.73	924.78	3,572.95	3,514.04	58.91	60.651	

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

Scientific Drilling Int.

Anticollision Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	***Offset TVD Reference:***	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. 17-16H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

Survey Program: 100-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-133.96	-130.42	-135.26	187.90				
100.00	100.00	98.24	98.24	0.14	0.14	-134.00	-130.66	-135.31	188.10	187.82	0.28	680.591	
200.00	200.00	199.04	199.04	0.50	0.49	-134.09	-131.01	-135.25	188.30	187.31	0.99	190.444	
251.71	251.71	250.71	250.71	0.68	0.67	-134.12	-131.08	-135.18	188.29	186.94	1.35	139.082	
300.00	300.00	298.96	298.96	0.85	0.84	-134.13	-131.10	-135.16	188.30	186.60	1.69	111.110	
400.00	400.00	399.12	399.12	1.21	1.18	-134.11	-131.05	-135.19	188.28	185.88	2.40	78.546	
500.00	500.00	499.03	499.03	1.57	1.53	-134.08	-130.95	-135.22	188.24	185.13	3.10	60.675	
600.00	600.00	599.36	599.36	1.93	1.88	-134.07	-130.85	-135.18	188.13	184.32	3.81	49.362	
700.00	700.00	699.19	699.19	2.29	2.23	-134.06	-130.74	-135.08	187.99	183.47	4.52	41.593	
729.78	729.78	728.78	728.78	2.40	2.33	-134.06	-130.71	-135.09	187.97	183.24	4.73	39.736	
800.00	800.00	798.49	798.49	2.65	2.58	-134.02	-130.70	-135.23	188.07	182.84	5.23	35.986	
900.00	900.00	897.72	897.72	3.01	2.92	-134.04	-131.07	-135.52	188.54	182.61	5.93	31.790 ES	
1,000.00	1,000.00	995.85	995.84	3.36	3.27	-134.21	-132.18	-135.88	189.59	182.96	6.63	28.591	
1,100.00	1,100.00	1,092.63	1,092.53	3.72	3.61	-135.15	-136.07	-135.38	192.06	184.73	7.33	26.211	
1,200.00	1,200.00	1,189.14	1,188.74	4.08	3.95	-137.03	-143.51	-133.71	196.42	188.39	8.03	24.473	
1,300.00	1,300.00	1,286.77	1,285.67	4.44	4.30	-139.91	-154.52	-130.08	202.42	193.69	8.73	23.177	
1,400.00	1,400.00	1,385.18	1,383.17	4.80	4.67	-143.09	-167.01	-125.44	209.47	200.02	9.45	22.165	
1,500.00	1,500.00	1,484.17	1,481.23	5.16	5.04	-146.06	-179.80	-120.98	217.44	207.27	10.17	21.375	
1,600.00	1,600.00	1,583.84	1,580.03	5.52	5.42	-148.73	-192.23	-116.75	225.71	214.81	10.90	20.710	
1,700.00	1,700.00	1,681.73	1,677.11	5.87	5.80	-151.05	-204.25	-112.97	234.44	222.82	11.62	20.177	
1,800.00	1,800.00	1,779.82	1,774.23	6.23	6.19	-153.43	-217.36	-108.72	244.29	231.95	12.34	19.795	
1,900.00	1,900.00	1,883.21	1,876.64	6.59	6.60	-155.71	-230.68	-104.10	254.07	240.99	13.08	19.422	
2,000.00	2,000.00	1,985.02	1,977.81	6.95	7.00	-157.45	-241.48	-100.25	262.31	248.50	13.81	18.991	
2,100.00	2,099.98	2,081.89	2,074.08	7.31	7.38	-159.01	-251.68	-96.83	272.43	257.92	14.51	18.777	
2,200.00	2,199.86	2,181.14	2,172.67	7.67	7.77	-160.72	-262.63	-93.53	286.16	270.95	15.21	18.811	
2,300.00	2,299.73	2,276.80	2,267.67	8.02	8.15	-162.28	-273.37	-90.48	300.77	284.85	15.92	18.897	
2,400.00	2,399.59	2,375.99	2,366.12	8.38	8.55	-173.34	-285.04	-87.34	316.12	299.49	16.63	19.009	
2,500.00	2,499.42	2,478.73	2,468.18	8.74	8.96	153.94	-296.34	-83.94	331.40	314.06	17.35	19.104	
2,600.00	2,599.11	2,582.45	2,571.36	9.09	9.36	136.07	-306.27	-80.34	346.02	327.95	18.07	19.152	
2,700.00	2,698.53	2,682.30	2,670.74	9.45	9.75	126.79	-315.18	-76.40	360.59	341.82	18.77	19.206	
2,800.00	2,797.74	2,781.97	2,769.90	9.80	10.14	126.49	-323.95	-71.55	375.24	355.74	19.50	19.245	
2,900.00	2,896.95	2,879.18	2,866.45	10.16	10.52	126.66	-333.23	-65.16	390.17	369.95	20.22	19.297	
3,000.00	2,996.16	2,977.16	2,963.78	10.52	10.91	126.85	-342.72	-58.98	405.31	384.36	20.95	19.349	
3,100.00	3,095.37	3,073.46	3,059.39	10.89	11.30	127.01	-352.49	-52.90	420.89	399.22	21.67	19.420	
3,200.00	3,194.58	3,168.09	3,153.21	11.25	11.68	127.05	-362.97	-46.31	437.19	414.79	22.40	19.521	
3,300.00	3,293.79	3,264.49	3,248.65	11.62	12.08	127.03	-374.70	-39.54	454.50	431.37	23.13	19.651	
3,400.00	3,393.00	3,366.45	3,349.79	11.99	12.49	127.22	-386.23	-33.85	471.39	447.51	23.88	19.739	
3,500.00	3,492.21	3,466.82	3,449.53	12.36	12.90	127.58	-396.63	-29.55	487.75	463.12	24.63	19.807	
3,600.00	3,591.41	3,564.96	3,547.10	12.74	13.29	127.97	-406.55	-25.85	504.04	478.68	25.36	19.875	
3,700.00	3,690.62	3,663.86	3,645.44	13.11	13.68	128.39	-416.46	-22.60	520.41	494.31	26.10	19.939	
3,800.00	3,789.83	3,764.26	3,745.32	13.49	14.07	128.82	-426.19	-19.48	536.54	509.70	26.84	19.987	
3,900.00	3,889.04	3,863.33	3,843.91	13.86	14.46	129.25	-435.50	-16.60	552.49	524.91	27.58	20.029	
4,000.00	3,988.25	3,965.48	3,945.59	14.24	14.86	129.70	-444.90	-13.86	568.37	540.04	28.34	20.059	
4,100.00	4,087.46	4,075.90	4,055.66	14.62	15.28	130.26	-453.21	-11.38	582.85	553.73	29.11	20.020	
4,200.00	4,186.67	4,180.11	4,159.71	15.00	15.66	130.89	-458.95	-9.60	595.65	565.78	29.87	19.944	
4,300.00	4,285.88	4,278.52	4,257.97	15.38	16.02	131.49	-464.02	-8.20	608.30	577.70	30.60	19.881	
4,400.00	4,385.08	4,378.83	4,358.15	15.76	16.39	132.11	-469.06	-7.22	621.04	589.71	31.33	19.821	
4,500.00	4,484.29	4,482.81	4,462.05	16.15	16.75	132.91	-473.09	-7.75	633.36	601.28	32.07	19.747	
4,600.00	4,583.50	4,583.60	4,562.79	16.53	17.10	133.76	-475.97	-9.19	645.19	612.40	32.80	19.673	
4,700.00	4,682.71	4,684.44	4,663.59	16.91	17.44	134.63	-478.38	-10.94	656.86	623.34	33.52	19.599	
4,800.00	4,781.92	4,781.57	4,760.67	17.30	17.77	135.42	-480.80	-12.55	668.72	634.49	34.22	19.540	
4,900.00	4,881.13	4,885.52	4,864.58	17.68	18.13	136.24	-483.04	-14.21	680.38	645.42	34.95	19.465	

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

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	*0.00 usft*	***Output errors are at***	*2.00 sigma*
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. 17-16H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

Survey Program: 100-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.00	9,978.11	9,989.52	9,967.42	35.71	35.45	-147.24	-506.64	-96.95	783.95	713.31	70.65	11.097	
10,100.00	10,078.11	10,083.06	10,060.92	36.06	35.78	-147.09	-506.85	-99.54	785.64	714.31	71.33	11.015	
10,200.00	10,178.11	10,135.76	10,113.55	36.42	35.97	-147.07	-508.77	-101.02	790.44	718.58	71.87	10.999	
10,300.00	10,278.11	10,184.00	10,161.38	36.77	36.15	-147.24	-514.81	-102.19	801.99	729.59	72.40	11.077	
10,400.00	10,378.11	10,230.57	10,206.80	37.12	36.34	-147.64	-524.99	-102.02	819.96	747.03	72.93	11.244	
10,500.00	10,477.95	10,278.00	10,251.98	37.46	36.54	31.15	-539.21	-99.79	840.37	767.29	73.08	11.500	
10,600.00	10,575.10	10,341.00	10,309.99	37.76	36.82	29.92	-563.14	-94.53	849.92	778.50	71.42	11.901	
10,700.00	10,665.37	10,391.39	10,354.51	38.02	37.05	29.73	-585.96	-88.67	846.72	778.87	67.85	12.479	
10,800.00	10,744.80	10,436.00	10,392.62	38.23	37.26	30.53	-608.50	-83.22	831.02	768.00	63.03	13.185	
10,900.00	10,809.93	10,476.69	10,425.53	38.38	37.47	32.31	-631.83	-78.07	804.32	746.27	58.05	13.855	
11,000.00	10,857.92	10,516.32	10,456.03	38.49	37.67	35.35	-656.79	-73.96	767.45	712.81	54.64	14.047	
11,100.00	10,886.65	10,561.00	10,488.62	38.65	37.90	40.20	-687.19	-70.85	721.50	666.69	54.81	13.163	
11,200.00	10,895.01	10,620.09	10,530.22	38.84	38.22	47.56	-729.06	-68.13	666.83	607.24	59.59	11.189	
11,300.00	10,895.00	10,702.04	10,589.29	39.06	38.69	52.24	-785.67	-63.47	607.62	544.39	63.43	9.582	
11,400.00	10,895.00	10,749.00	10,621.91	39.33	38.96	55.16	-819.33	-60.90	553.87	488.06	65.81	8.416	
11,500.00	10,895.00	10,781.00	10,642.54	39.65	39.15	57.18	-843.77	-59.90	508.16	440.63	67.53	7.525	
11,600.00	10,895.00	10,827.75	10,669.72	40.02	39.44	60.08	-881.78	-59.58	472.53	402.69	69.84	6.766	
11,700.00	10,895.00	10,890.61	10,702.03	40.44	39.84	63.81	-935.67	-59.97	446.08	373.44	72.65	6.140	
11,800.00	10,895.00	10,958.67	10,731.81	40.90	40.29	67.48	-996.83	-60.79	427.81	352.49	75.32	5.680	
11,900.00	10,895.00	11,023.85	10,752.91	41.40	40.74	70.25	-1,058.43	-62.33	418.11	340.66	77.46	5.398	
11,966.30	10,895.00	11,069.36	10,762.40	41.77	41.05	71.58	-1,102.89	-64.33	416.45	337.80	78.65	5.295	
12,000.00	10,895.00	11,095.00	10,766.05	41.96	41.23	72.12	-1,128.22	-65.79	416.85	337.64	79.21	5.263	
12,100.00	10,895.00	11,182.74	10,771.84	42.55	41.84	73.11	-1,215.56	-71.17	420.93	340.18	80.75	5.213	
12,200.00	10,895.00	11,282.16	10,774.45	43.18	42.57	73.67	-1,314.79	-76.56	425.65	343.38	82.28	5.173	
12,300.00	10,895.00	11,380.32	10,773.46	43.85	43.34	73.75	-1,412.80	-81.90	431.42	347.72	83.70	5.154	
12,400.00	10,895.00	11,483.86	10,772.63	44.56	44.20	73.82	-1,516.24	-86.47	436.14	350.89	85.24	5.116	
12,500.00	10,895.00	11,587.38	10,771.30	45.30	45.11	73.82	-1,619.66	-90.69	440.69	353.85	86.84	5.075	
12,600.00	10,895.00	11,691.72	10,770.49	46.08	46.07	73.85	-1,723.95	-94.04	444.27	355.73	88.54	5.018	
12,700.00	10,895.00	11,805.75	10,771.61	46.89	47.17	74.06	-1,837.95	-95.66	445.64	355.17	90.47	4.926	
12,800.00	10,895.00	11,907.82	10,773.89	47.73	48.21	74.34	-1,940.00	-95.45	445.10	352.69	92.41	4.817	
12,900.00	10,895.00	12,006.98	10,775.24	48.59	49.25	74.50	-2,039.15	-94.83	444.40	350.08	94.33	4.711	
12,963.97	10,895.00	12,068.49	10,775.32	49.17	49.92	74.50	-2,100.65	-94.50	444.23	348.70	95.53	4.650	
13,000.00	10,895.00	12,101.86	10,775.09	49.49	50.28	74.48	-2,134.02	-94.42	444.31	348.12	96.19	4.619	
13,100.00	10,895.00	12,190.38	10,775.55	50.41	51.26	74.60	-2,222.52	-96.03	446.19	348.11	98.08	4.549	
13,200.00	10,895.00	12,278.98	10,775.41	51.35	52.25	74.72	-2,311.04	-99.85	450.66	350.64	100.02	4.506	
13,300.00	10,895.00	12,377.87	10,774.31	52.32	53.38	74.77	-2,409.77	-105.21	456.46	354.37	102.09	4.471	
13,400.00	10,895.00	12,475.38	10,773.34	53.31	54.52	74.84	-2,507.12	-110.76	462.49	358.30	104.19	4.439	
13,500.00	10,895.00	12,564.13	10,770.34	54.32	55.58	74.69	-2,595.61	-116.77	470.16	364.02	106.14	4.430	
13,600.00	10,895.00	12,670.74	10,765.39	55.35	56.87	74.35	-2,701.87	-123.85	478.07	369.81	108.25	4.416	
13,700.00	10,895.00	12,773.37	10,760.85	56.40	58.14	74.04	-2,804.21	-129.93	485.25	374.89	110.36	4.397	
13,800.00	10,895.00	12,881.22	10,757.40	57.46	59.50	73.82	-2,911.88	-135.10	491.00	378.38	112.62	4.360	
13,900.00	10,895.00	12,986.02	10,754.87	58.55	60.84	73.68	-3,016.57	-139.10	495.61	380.71	114.90	4.313	
14,000.00	10,895.00	13,095.90	10,756.07	59.64	62.27	73.95	-3,126.38	-142.85	498.88	381.39	117.48	4.246	
14,100.00	10,895.00	13,191.82	10,758.36	60.75	63.53	74.28	-3,222.24	-145.29	500.95	380.99	119.96	4.176	
14,200.00	10,895.00	13,273.93	10,759.99	61.88	64.62	74.59	-3,304.23	-149.26	505.41	383.13	122.27	4.133	
14,300.00	10,895.00	13,361.12	10,760.31	63.02	65.78	74.85	-3,391.12	-156.47	513.50	388.86	124.64	4.120	
14,400.00	10,895.00	13,452.18	10,760.40	64.17	66.99	75.12	-3,481.76	-165.21	523.03	395.96	127.07	4.116	
14,500.00	10,895.00	13,543.24	10,759.68	65.34	68.20	75.34	-3,572.22	-175.65	534.57	405.07	129.51	4.128	
14,600.00	10,895.00	13,657.97	10,756.08	66.51	69.76	75.31	-3,686.22	-188.00	546.17	414.02	132.15	4.133	
14,700.00	10,895.00	13,769.07	10,754.39	67.70	71.29	75.36	-3,797.00	-196.17	553.89	419.07	134.83	4.108	
14,800.00	10,895.00	13,873.96	10,753.89	68.89	72.74	75.50	-3,901.66	-203.09	560.67	423.18	137.49	4.078	
14,900.00	10,895.00	13,981.71	10,755.56	70.10	74.26	75.83	-4,009.20	-209.45	566.28	425.97	140.32	4.036	

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

Scientific Drilling Int.

Anticollision Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. 17-25H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

Survey Program: 181-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-45.34	50.20	-50.80	71.53				
100.00	100.00	95.71	95.71	0.14	0.16	-45.26	50.41	-50.87	71.62	71.32	0.29	244.132	
200.00	200.00	195.45	195.44	0.50	0.35	-45.00	51.08	-51.07	72.23	71.39	0.84	85.813	
300.00	300.00	295.64	295.64	0.85	0.70	-44.38	52.15	-51.03	72.96	71.41	1.56	46.862	
400.00	400.00	396.05	396.04	1.21	1.06	-43.68	52.81	-50.43	73.02	70.75	2.27	32.158	
412.24	412.24	408.26	408.24	1.26	1.10	-43.58	52.89	-50.33	73.02	70.66	2.36	30.968	
500.00	500.00	495.73	495.71	1.57	1.41	-42.85	53.66	-49.77	73.19	70.21	2.98	24.532	
600.00	600.00	595.54	595.52	1.93	1.77	-42.51	54.37	-49.83	73.75	70.06	3.70	19.948	
700.00	700.00	695.46	695.44	2.29	2.12	-42.36	55.01	-50.16	74.45	70.04	4.41	16.878	
800.00	800.00	796.22	796.19	2.65	2.47	-42.17	55.52	-50.29	74.91	69.79	5.12	14.628	
900.00	900.00	896.23	896.20	3.01	2.81	-42.25	55.10	-50.04	74.43	68.61	5.82	12.796	
968.03	968.03	964.06	964.03	3.25	3.04	-42.45	54.86	-50.18	74.35	68.06	6.29	11.822	
1,000.00	1,000.00	995.96	995.93	3.36	3.15	-42.62	54.73	-50.35	74.37	67.85	6.51	11.419	
1,100.00	1,100.00	1,095.64	1,095.61	3.72	3.49	-43.34	54.31	-51.24	74.66	67.45	7.21	10.350	
1,200.00	1,200.00	1,195.65	1,195.61	4.08	3.84	-44.30	53.83	-52.53	75.21	67.29	7.92	9.496	
1,300.00	1,300.00	1,295.96	1,295.91	4.44	4.19	-45.17	53.23	-53.55	75.51	66.88	8.63	8.751	
1,400.00	1,400.00	1,395.82	1,395.77	4.80	4.54	-45.98	52.62	-54.46	75.73	66.39	9.34	8.111	
1,500.00	1,500.00	1,495.83	1,495.77	5.16	4.89	-46.87	52.00	-55.51	76.06	66.01	10.05	7.571	
1,600.00	1,600.00	1,596.01	1,595.94	5.52	5.24	-47.76	51.25	-56.45	76.25	65.49	10.76	7.087	
1,700.00	1,700.00	1,696.13	1,696.05	5.87	5.60	-48.49	50.52	-57.08	76.23	64.76	11.47	6.646	
1,800.00	1,800.00	1,796.25	1,796.17	6.23	5.95	-49.35	49.59	-57.76	76.13	63.95	12.18	6.250	
1,900.00	1,900.00	1,896.51	1,896.42	6.59	6.30	-50.14	48.54	-58.13	75.73	62.84	12.89	5.876	
2,000.00	2,000.00	1,996.67	1,996.57	6.95	6.64	-50.16	48.09	-57.62	75.05	61.46	13.59	5.521	
2,100.00	2,099.98	2,096.70	2,096.60	7.31	6.99	-50.30	48.48	-56.23	73.12	58.83	14.29	5.116	
2,200.00	2,199.86	2,196.66	2,196.54	7.67	7.33	-52.31	48.92	-54.73	69.22	54.23	14.99	4.618	
2,300.00	2,299.73	2,296.35	2,296.23	8.02	7.67	-55.02	49.19	-53.36	65.17	49.48	15.69	4.153	
2,400.00	2,399.59	2,396.39	2,396.26	8.38	8.02	-68.15	49.12	-52.40	61.56	45.16	16.40	3.754	
2,480.81	2,480.27	2,476.99	2,476.86	8.67	8.30	-99.02	48.68	-51.61	60.24	43.27	16.97	3.550 CC	
2,500.00	2,499.42	2,496.10	2,495.96	8.74	8.37	-105.04	48.57	-51.47	60.32	43.21	17.10	3.527 ES, SF	
2,600.00	2,599.11	2,595.55	2,595.41	9.09	8.72	-129.30	47.74	-51.06	63.37	45.59	17.78	3.565	
2,700.00	2,698.53	2,694.89	2,694.75	9.45	9.07	-145.49	46.68	-50.98	70.97	52.55	18.42	3.853	
2,800.00	2,797.74	2,794.98	2,794.83	9.80	9.42	-152.02	45.40	-50.38	80.96	61.86	19.10	4.239	
2,900.00	2,896.95	2,895.39	2,895.19	10.16	9.77	-156.86	43.49	-48.56	90.38	70.59	19.79	4.567	
3,000.00	2,996.16	2,995.18	2,994.94	10.52	10.12	-160.61	41.85	-45.92	99.47	78.98	20.48	4.856	
3,100.00	3,095.37	3,094.93	3,094.64	10.89	10.47	-163.49	40.69	-43.00	108.58	87.40	21.18	5.126	
3,200.00	3,194.58	3,195.04	3,194.67	11.25	10.82	-166.16	39.12	-39.40	117.32	95.44	21.88	5.361	
3,300.00	3,293.79	3,293.40	3,292.97	11.62	11.17	-168.19	38.03	-36.21	126.54	103.96	22.58	5.604	
3,400.00	3,393.00	3,391.56	3,391.11	11.99	11.51	-169.39	38.03	-34.24	136.90	113.63	23.28	5.882	
3,500.00	3,492.21	3,490.45	3,489.99	12.36	11.86	-170.21	38.45	-33.04	148.00	124.02	23.98	6.172	
3,600.00	3,591.41	3,589.82	3,589.35	12.74	12.21	-170.93	38.81	-31.88	159.18	134.50	24.68	6.450	
3,700.00	3,690.62	3,689.17	3,688.70	13.11	12.56	-171.58	39.12	-30.71	170.38	145.00	25.38	6.712	
3,800.00	3,789.83	3,788.45	3,787.97	13.49	12.91	-172.20	39.26	-29.52	181.61	155.52	26.09	6.961	
3,900.00	3,889.04	3,888.31	3,887.83	13.86	13.26	-172.82	39.21	-28.20	192.80	166.00	26.80	7.194	
4,000.00	3,988.25	3,988.16	3,987.66	14.24	13.62	-173.41	39.08	-26.53	203.70	176.19	27.51	7.405	
4,100.00	4,087.46	4,086.90	4,086.38	14.62	13.97	-174.02	38.65	-24.82	214.63	186.42	28.22	7.607	
4,200.00	4,186.67	4,186.35	4,185.82	15.00	14.32	-174.62	38.01	-23.25	225.79	196.86	28.93	7.805	
4,300.00	4,285.88	4,286.32	4,285.77	15.38	14.67	-175.18	37.33	-21.47	236.79	207.15	29.64	7.989	
4,400.00	4,385.08	4,384.73	4,384.16	15.76	15.02	-175.65	36.83	-19.82	247.86	217.51	30.35	8.167	
4,500.00	4,484.29	4,484.25	4,483.67	16.15	15.38	-176.06	36.33	-18.34	259.12	228.06	31.06	8.342	
4,600.00	4,583.50	4,583.53	4,582.94	16.53	15.73	-176.43	35.86	-16.85	270.37	238.59	31.78	8.509	
4,700.00	4,682.71	4,681.14	4,680.54	16.91	16.08	-176.74	35.45	-15.72	281.94	249.46	32.48	8.680	
4,800.00	4,781.92	4,781.19	4,780.59	17.30	16.44	-177.02	35.02	-14.76	293.70	260.50	33.20	8.847	

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

Scientific Drilling Int.

Anticollision Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. 17-25H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

Survey Program: 181-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,900.00	9,878.11	8,135.00	7,976.13	35.35	28.39	-143.58	-340.14	-36.31	1,994.30	1,931.34	62.96	31.674	
10,000.00	9,978.11	8,135.00	7,976.13	35.71	28.39	-143.58	-340.14	-36.31	2,089.70	2,026.38	63.32	33.003	
10,100.00	10,078.11	8,135.00	7,976.13	36.06	28.39	-143.58	-340.14	-36.31	2,185.50	2,121.83	63.67	34.323	
10,200.00	10,178.11	8,150.86	7,979.75	36.42	28.46	-144.52	-355.51	-34.81	2,281.32	2,217.27	64.06	35.615	
10,300.00	10,278.11	8,167.00	7,982.81	36.77	28.54	-145.47	-371.27	-33.17	2,377.89	2,313.45	64.44	36.904	
10,400.00	10,378.11	8,167.00	7,982.81	37.12	28.54	-145.47	-371.27	-33.17	2,474.39	2,409.60	64.79	38.190	
10,500.00	10,477.95	8,167.00	7,982.81	37.46	28.54	23.56	-371.27	-33.17	2,570.22	2,505.61	64.61	39.779	
10,600.00	10,575.10	8,167.00	7,982.81	37.76	28.54	15.31	-371.27	-33.17	2,660.13	2,597.79	62.34	42.674	
10,700.00	10,665.37	8,167.00	7,982.81	38.02	28.54	11.51	-371.27	-33.17	2,740.66	2,682.89	57.78	47.435	
10,800.00	10,744.80	8,181.39	7,984.99	38.23	28.61	9.37	-385.41	-31.68	2,808.95	2,757.69	51.26	54.796	
10,900.00	10,809.93	8,194.00	7,986.45	38.38	28.67	8.13	-397.87	-30.38	2,863.01	2,819.65	43.35	66.037	
11,000.00	10,857.92	8,194.00	7,986.45	38.49	28.67	7.46	-397.87	-30.38	2,901.23	2,866.22	35.01	82.858	
11,100.00	10,886.65	8,225.00	7,988.72	38.65	28.82	7.06	-428.65	-27.58	2,922.10	2,894.02	28.08	104.061	
11,200.00	10,895.01	8,225.00	7,988.72	38.84	28.82	7.00	-428.65	-27.58	2,925.55	2,900.20	25.34	115.450	
11,300.00	10,895.00	8,320.00	7,990.63	39.06	29.33	6.85	-523.25	-19.22	2,922.51	2,896.78	25.74	113.560	
11,400.00	10,895.00	8,338.28	7,990.48	39.33	29.44	6.82	-541.45	-17.46	2,921.17	2,895.18	26.00	112.373	
11,416.81	10,895.00	8,350.10	7,990.36	39.39	29.52	6.79	-553.21	-16.34	2,921.16	2,895.09	26.07	112.052	
11,500.00	10,895.00	8,415.00	7,989.38	39.65	29.91	6.68	-617.84	-10.53	2,921.53	2,895.07	26.46	110.420	
11,600.00	10,895.00	8,467.06	7,988.11	40.02	30.27	6.61	-669.75	-6.70	2,923.07	2,896.15	26.91	108.604	
11,700.00	10,895.00	8,510.00	7,986.65	40.44	30.57	6.56	-712.60	-4.48	2,926.14	2,898.76	27.38	106.883	
11,800.00	10,895.00	8,576.21	7,983.62	40.90	31.07	6.54	-778.72	-3.30	2,930.66	2,902.67	27.99	104.699	
11,900.00	10,895.00	8,899.28	7,979.15	41.40	33.87	6.42	-1,101.43	3.36	2,930.93	2,901.00	29.93	97.914	
12,000.00	10,895.00	8,983.00	7,980.28	41.96	34.70	6.35	-1,185.05	7.32	2,929.07	2,898.28	30.79	95.145	
12,100.00	10,895.00	9,078.00	7,981.11	42.55	35.69	6.22	-1,279.78	14.19	2,927.44	2,895.70	31.73	92.249	
12,200.00	10,895.00	9,142.91	7,981.02	43.18	36.41	6.08	-1,344.29	21.40	2,926.46	2,893.92	32.54	89.932	
12,218.27	10,895.00	9,153.77	7,980.90	43.30	36.53	6.06	-1,355.07	22.71	2,926.44	2,893.75	32.69	89.531	
12,300.00	10,895.00	9,216.59	7,979.80	43.85	37.25	5.90	-1,417.36	30.77	2,926.77	2,893.35	33.42	87.573	
12,400.00	10,895.00	9,352.52	7,977.47	44.56	38.86	5.55	-1,552.03	49.05	2,927.29	2,892.60	34.69	84.380	
12,500.00	10,895.00	9,437.61	7,976.85	45.30	39.90	5.36	-1,636.53	59.01	2,926.93	2,891.22	35.71	81.956	
12,501.41	10,895.00	9,438.74	7,976.84	45.31	39.91	5.35	-1,637.65	59.13	2,926.93	2,891.21	35.73	81.923	
12,600.00	10,895.00	9,491.78	7,976.06	46.08	40.57	5.26	-1,690.44	64.26	2,927.61	2,891.04	36.57	80.044	
12,700.00	10,895.00	9,551.00	7,974.02	46.89	41.31	5.16	-1,749.43	69.08	2,930.15	2,892.66	37.49	78.159	
12,800.00	10,895.00	9,656.65	7,969.84	47.73	42.67	5.00	-1,854.67	77.30	2,933.46	2,894.74	38.73	75.750	
12,900.00	10,895.00	9,763.17	7,966.38	48.59	44.06	4.86	-1,960.90	84.40	2,936.16	2,896.16	40.00	73.407	
13,000.00	10,895.00	9,874.06	7,963.36	49.49	45.53	4.77	-2,071.63	89.39	2,938.51	2,897.18	41.33	71.093	
13,100.00	10,895.00	9,975.00	7,961.01	50.41	46.88	4.72	-2,172.50	92.03	2,940.64	2,898.01	42.63	68.984	
13,200.00	10,895.00	10,025.00	7,959.88	51.35	47.55	4.71	-2,222.49	92.44	2,943.25	2,899.67	43.59	67.528	
13,300.00	10,895.00	10,119.00	7,956.10	52.32	48.82	4.70	-2,316.41	92.93	2,947.23	2,902.36	44.87	65.687	
13,400.00	10,895.00	10,281.95	7,951.14	53.31	51.09	4.61	-2,479.19	97.44	2,949.97	2,903.32	46.65	63.237	
13,500.00	10,895.00	10,388.44	7,948.50	54.32	52.62	4.47	-2,585.38	105.12	2,951.90	2,903.87	48.03	61.461	
13,600.00	10,895.00	10,471.16	7,946.45	55.35	53.81	4.35	-2,667.84	111.21	2,953.84	2,904.59	49.25	59.972	
13,700.00	10,895.00	10,561.58	7,943.76	56.40	55.13	4.25	-2,758.07	116.46	2,956.39	2,905.84	50.55	58.487	
13,800.00	10,895.00	10,640.47	7,941.17	57.46	56.29	4.16	-2,836.78	121.10	2,959.29	2,907.52	51.77	57.164	
13,900.00	10,895.00	10,817.39	7,936.18	58.55	58.90	3.99	-3,013.35	129.98	2,962.09	2,908.38	53.71	55.149	
14,000.00	10,895.00	10,934.57	7,935.04	59.64	60.65	3.85	-3,130.27	137.78	2,962.64	2,907.41	55.23	53.644	
14,100.00	10,895.00	11,062.76	7,935.06	60.75	62.57	3.75	-3,258.35	143.08	2,962.37	2,905.52	56.85	52.112	
14,200.00	10,895.00	11,179.27	7,936.03	61.88	64.32	3.70	-3,374.81	146.16	2,961.39	2,903.00	58.39	50.714	
14,300.00	10,895.00	11,283.44	7,937.66	63.02	65.90	3.65	-3,478.92	149.18	2,959.65	2,899.79	59.86	49.446	
14,400.00	10,895.00	11,350.00	7,937.88	64.17	66.92	3.58	-3,545.37	152.97	2,958.90	2,897.87	61.04	48.478	
14,409.39	10,895.00	11,350.00	7,937.88	64.28	66.92	3.58	-3,545.37	152.97	2,958.89	2,897.79	61.10	48.426	
14,500.00	10,895.00	11,393.36	7,937.33	65.34	67.59	3.52	-3,588.61	156.03	2,959.64	2,897.59	62.05	47.700	
14,600.00	10,895.00	11,446.00	7,935.79	66.51	68.40	3.45	-3,641.10	159.84	2,962.09	2,898.96	63.13	46.921	

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

Scientific Drilling Int.

Anticollision Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. Com 17-35H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

Survey Program: 154-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.46	-0.20	-25.10	25.12				
100.00	100.00	98.84	98.84	0.14	0.15	-90.36	-0.16	-25.42	25.42	25.13	0.29	87.039	
200.00	200.00	198.70	198.70	0.50	0.40	-90.04	-0.02	-26.36	26.36	25.46	0.90	29.423	
300.00	300.00	298.64	298.62	0.85	0.76	-89.40	0.29	-27.64	27.64	26.03	1.61	17.157	
400.00	400.00	398.72	398.70	1.21	1.12	-89.25	0.38	-28.91	28.92	26.59	2.33	12.422	
500.00	500.00	498.81	498.78	1.57	1.47	-89.55	0.24	-29.75	29.76	26.71	3.04	9.777	
600.00	600.00	599.00	598.97	1.93	1.82	-90.49	-0.26	-30.23	30.23	26.48	3.75	8.053	
700.00	700.00	698.92	698.89	2.29	2.17	-91.82	-0.96	-30.38	30.40	25.94	4.46	6.814	
800.00	800.00	799.09	799.05	2.65	2.52	-92.56	-1.36	-30.49	30.52	25.35	5.17	5.907	
900.00	900.00	899.15	899.12	3.01	2.86	-93.09	-1.63	-30.22	30.27	24.40	5.87	5.159	
1,000.00	1,000.00	999.38	999.34	3.36	3.21	-94.60	-2.37	-29.39	29.48	22.91	6.57	4.487	
1,100.00	1,100.00	1,099.52	1,099.47	3.72	3.55	-96.26	-3.06	-27.88	28.05	20.77	7.27	3.856	
1,200.00	1,200.00	1,199.50	1,199.43	4.08	3.90	-96.95	-3.18	-26.08	26.28	18.30	7.98	3.294	
1,300.00	1,300.00	1,299.34	1,299.26	4.44	4.24	-97.56	-3.28	-24.72	24.93	16.25	8.68	2.872	
1,400.00	1,400.00	1,399.37	1,399.29	4.80	4.59	-96.79	-2.83	-23.79	23.96	14.58	9.39	2.553	
1,500.00	1,500.00	1,499.35	1,499.26	5.16	4.93	-95.60	-2.21	-22.56	22.67	12.58	10.09	2.247	
1,600.00	1,600.00	1,599.31	1,599.21	5.52	5.28	-94.17	-1.58	-21.60	21.65	10.86	10.80	2.006	
1,700.00	1,700.00	1,699.22	1,699.12	5.87	5.63	-93.02	-1.10	-20.82	20.85	9.35	11.51	1.813	
1,800.00	1,800.00	1,799.16	1,799.05	6.23	5.98	-91.80	-0.64	-20.45	20.46	8.25	12.21	1.675	
1,900.00	1,900.00	1,899.18	1,899.07	6.59	6.33	-92.53	-0.89	-20.11	20.13	7.20	12.92	1.557	
1,912.88	1,912.88	1,911.99	1,911.88	6.64	6.38	-92.78	-0.97	-20.08	20.10	7.09	13.01	1.545	CC, ES, SF
2,000.00	2,000.00	1,998.61	1,998.49	6.95	6.68	-94.59	-1.69	-21.07	21.15	7.52	13.63	1.552	
2,100.00	2,099.98	2,097.96	2,097.76	7.31	7.02	-100.26	-2.76	-24.65	25.09	10.76	14.33	1.751	
2,200.00	2,199.86	2,197.35	2,197.02	7.67	7.37	-109.21	-3.95	-29.81	31.66	16.63	15.03	2.107	
2,300.00	2,299.73	2,296.64	2,296.09	8.02	7.71	-114.03	-4.61	-36.39	40.00	24.27	15.73	2.543	
2,400.00	2,399.59	2,396.46	2,395.68	8.38	8.07	-126.63	-5.24	-43.04	48.63	32.20	16.43	2.959	
2,500.00	2,499.42	2,496.14	2,495.17	8.74	8.42	-159.37	-5.95	-49.13	59.04	41.93	17.11	3.450	
2,600.00	2,599.11	2,595.20	2,594.06	9.09	8.77	-176.26	-6.56	-54.86	72.09	54.32	17.77	4.057	
2,700.00	2,698.53	2,693.45	2,692.09	9.45	9.12	176.55	-6.48	-61.55	88.76	70.36	18.40	4.823	
2,800.00	2,797.74	2,792.42	2,790.84	9.80	9.47	177.96	-6.15	-68.09	107.08	88.00	19.08	5.611	
2,900.00	2,896.95	2,890.94	2,889.20	10.16	9.82	179.05	-6.47	-73.56	124.82	105.05	19.77	6.312	
3,000.00	2,996.16	2,988.29	2,986.37	10.52	10.17	-179.91	-6.42	-79.65	143.11	122.64	20.46	6.993	
3,100.00	3,095.37	3,086.02	3,083.79	10.89	10.53	-178.35	-4.62	-87.02	162.01	140.85	21.16	7.658	
3,200.00	3,194.58	3,184.87	3,182.30	11.25	10.88	-176.78	-1.84	-94.71	180.93	159.08	21.85	8.279	
3,300.00	3,293.79	3,282.89	3,279.99	11.62	11.24	-175.39	1.47	-102.08	199.55	177.00	22.55	8.850	
3,400.00	3,393.00	3,380.53	3,377.22	11.99	11.59	-174.02	5.46	-110.05	218.69	195.44	23.25	9.408	
3,500.00	3,492.21	3,479.84	3,476.18	12.36	11.96	-172.99	9.04	-117.66	237.56	213.61	23.95	9.919	
3,600.00	3,591.41	3,577.89	3,573.87	12.74	12.31	-172.05	12.96	-125.07	256.32	231.66	24.65	10.398	
3,700.00	3,690.62	3,668.96	3,664.51	13.11	12.65	-171.22	16.70	-133.04	276.26	250.93	25.33	10.906	
3,800.00	3,789.83	3,763.65	3,758.61	13.49	13.00	-170.58	19.59	-143.15	298.31	272.29	26.02	11.463	
3,900.00	3,889.04	3,863.37	3,857.69	13.86	13.38	-169.93	23.00	-153.93	320.45	293.71	26.73	11.987	
4,000.00	3,988.25	3,962.39	3,956.06	14.24	13.75	-169.17	27.70	-164.19	341.95	314.51	27.44	12.461	
4,100.00	4,087.46	4,059.13	4,052.16	14.62	14.12	-168.44	32.71	-174.21	363.42	335.28	28.14	12.913	
4,200.00	4,186.67	4,156.80	4,149.18	15.00	14.49	-167.86	37.29	-184.34	385.04	356.19	28.85	13.345	
4,300.00	4,285.88	4,252.88	4,244.62	15.38	14.85	-167.35	41.77	-194.50	406.88	377.33	29.55	13.767	
4,400.00	4,385.08	4,351.91	4,343.00	15.76	15.23	-166.89	46.25	-204.95	428.76	398.49	30.27	14.166	
4,500.00	4,484.29	4,451.96	4,442.46	16.15	15.61	-166.54	50.41	-214.89	450.11	419.13	30.99	14.527	
4,600.00	4,583.50	4,548.59	4,538.54	16.53	15.98	-166.24	54.35	-224.45	471.44	439.75	31.69	14.876	
4,700.00	4,682.71	4,646.97	4,636.35	16.91	16.35	-165.95	58.42	-234.17	492.76	460.36	32.41	15.206	
4,800.00	4,781.92	4,744.38	4,733.21	17.30	16.73	-165.69	62.48	-243.75	514.05	480.94	33.12	15.523	
4,900.00	4,881.13	4,841.79	4,830.04	17.68	17.10	-165.43	66.67	-253.46	535.46	501.63	33.83	15.829	
5,000.00	4,980.34	4,940.47	4,928.15	18.07	17.48	-165.19	70.91	-263.17	556.76	522.21	34.54	16.117	

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

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. Com 17-35H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

Survey Program: 154-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,900.00	9,878.11	9,894.86	9,875.58	35.35	35.09	-93.98	99.64	-433.87	762.96	693.39	69.57	10.966	
10,000.00	9,978.11	9,993.25	9,973.97	35.71	35.44	-93.92	100.32	-434.40	763.45	693.17	70.27	10.864	
10,100.00	10,078.11	10,094.47	10,075.18	36.06	35.79	-93.86	101.09	-434.55	763.54	692.56	70.98	10.757	
10,200.00	10,178.11	10,187.83	10,168.54	36.42	36.11	-93.84	101.43	-435.24	764.25	692.58	71.67	10.664	
10,300.00	10,278.11	10,285.35	10,266.04	36.77	36.46	-93.85	101.18	-436.60	765.66	693.29	72.37	10.580	
10,400.00	10,378.11	10,385.72	10,366.40	37.12	36.81	-93.90	100.44	-437.93	767.03	693.95	73.08	10.496	
10,500.00	10,477.95	10,485.90	10,466.56	37.46	37.16	86.39	99.16	-439.26	768.19	694.43	73.77	10.414	
10,600.00	10,575.10	10,586.71	10,567.37	37.76	37.51	88.02	97.93	-440.37	768.23	693.81	74.42	10.323	
10,635.54	10,608.18	10,620.99	10,601.65	37.85	37.63	88.97	97.97	-440.64	768.16	693.52	74.64	10.292	
10,700.00	10,665.37	10,677.94	10,658.59	38.02	37.83	90.86	98.05	-441.06	768.67	693.66	75.01	10.248	
10,800.00	10,744.80	10,756.90	10,737.55	38.23	38.11	93.85	97.55	-441.70	772.97	697.52	75.45	10.245	
10,900.00	10,809.93	10,822.24	10,802.87	38.38	38.33	96.02	96.24	-442.41	784.56	708.84	75.72	10.361	
11,000.00	10,857.92	10,869.97	10,850.58	38.49	38.50	96.37	95.09	-443.08	806.34	730.34	76.00	10.610	
11,100.00	10,886.65	10,899.70	10,880.30	38.65	38.60	94.20	94.35	-443.58	839.66	763.18	76.48	10.979	
11,200.00	10,895.01	11,303.78	11,253.13	38.84	39.71	115.85	-30.21	-413.47	879.12	807.44	71.68	12.264	
11,300.00	10,895.00	11,404.91	11,323.12	39.06	39.89	120.27	-102.78	-407.37	914.84	844.96	69.88	13.092	
11,400.00	10,895.00	11,675.00	11,457.67	39.33	40.62	127.59	-334.93	-403.62	946.02	879.63	66.39	14.250	
11,500.00	10,895.00	11,675.00	11,457.67	39.65	40.62	127.59	-334.93	-403.62	972.35	905.66	66.69	14.580	
11,600.00	10,895.00	11,675.00	11,457.67	40.02	40.62	127.59	-334.93	-403.62	1,007.96	940.92	67.04	15.035	
11,700.00	10,895.00	11,675.00	11,457.67	40.44	40.62	127.59	-334.93	-403.62	1,051.91	984.48	67.43	15.599	
11,800.00	10,895.00	11,675.00	11,457.67	40.90	40.62	127.59	-334.93	-403.62	1,103.19	1,035.33	67.86	16.256	
11,900.00	10,895.00	11,675.00	11,457.67	41.40	40.62	127.59	-334.93	-403.62	1,160.84	1,092.51	68.33	16.988	
12,000.00	10,895.00	11,675.00	11,457.67	41.96	40.62	127.59	-334.93	-403.62	1,223.96	1,155.12	68.84	17.780	
12,100.00	10,895.00	11,675.00	11,457.67	42.55	40.62	127.59	-334.93	-403.62	1,291.74	1,222.36	69.38	18.618	
12,200.00	10,895.00	11,675.00	11,457.67	43.18	40.62	127.59	-334.93	-403.62	1,363.50	1,293.54	69.96	19.490	
12,300.00	10,895.00	11,675.00	11,457.67	43.85	40.62	127.59	-334.93	-403.62	1,438.62	1,368.06	70.57	20.387	
12,400.00	10,895.00	11,675.00	11,457.67	44.56	40.62	127.59	-334.93	-403.62	1,516.63	1,445.42	71.21	21.299	
12,500.00	10,895.00	11,675.00	11,457.67	45.30	40.62	127.59	-334.93	-403.62	1,597.09	1,525.21	71.88	22.220	
12,600.00	10,895.00	11,675.00	11,457.67	46.08	40.62	127.59	-334.93	-403.62	1,679.64	1,607.07	72.57	23.144	
12,700.00	10,895.00	11,675.00	11,457.67	46.89	40.62	127.59	-334.93	-403.62	1,764.01	1,690.71	73.30	24.067	
12,800.00	10,895.00	11,675.00	11,457.67	47.73	40.62	127.59	-334.93	-403.62	1,849.93	1,775.89	74.04	24.984	
12,900.00	10,895.00	11,675.00	11,457.67	48.59	40.62	127.59	-334.93	-403.62	1,937.21	1,862.39	74.82	25.893	
13,000.00	10,895.00	11,675.00	11,457.67	49.49	40.62	127.59	-334.93	-403.62	2,025.66	1,950.05	75.61	26.791	
13,100.00	10,895.00	11,675.00	11,457.67	50.41	40.62	127.59	-334.93	-403.62	2,115.14	2,038.71	76.42	27.676	
13,200.00	10,895.00	11,675.00	11,457.67	51.35	40.62	127.59	-334.93	-403.62	2,205.52	2,128.26	77.26	28.547	
13,300.00	10,895.00	11,675.00	11,457.67	52.32	40.62	127.59	-334.93	-403.62	2,296.71	2,218.59	78.11	29.402	
13,400.00	10,895.00	11,675.00	11,457.67	53.31	40.62	127.59	-334.93	-403.62	2,388.59	2,309.61	78.99	30.241	
13,500.00	10,895.00	11,675.00	11,457.67	54.32	40.62	127.59	-334.93	-403.62	2,481.11	2,401.23	79.88	31.062	
13,600.00	10,895.00	11,675.00	11,457.67	55.35	40.62	127.59	-334.93	-403.62	2,574.18	2,493.40	80.78	31.867	
13,700.00	10,895.00	11,675.00	11,457.67	56.40	40.62	127.59	-334.93	-403.62	2,667.76	2,586.06	81.70	32.653	
13,800.00	10,895.00	11,675.00	11,457.67	57.46	40.62	127.59	-334.93	-403.62	2,761.79	2,679.15	82.63	33.422	
13,900.00	10,895.00	11,675.00	11,457.67	58.55	40.62	127.59	-334.93	-403.62	2,856.22	2,772.64	83.58	34.173	
14,000.00	10,895.00	11,675.00	11,457.67	59.64	40.62	127.59	-334.93	-403.62	2,951.02	2,866.48	84.54	34.906	
14,100.00	10,895.00	11,675.00	11,457.67	60.75	40.62	127.59	-334.93	-403.62	3,046.15	2,960.64	85.51	35.622	
14,200.00	10,895.00	11,675.00	11,457.67	61.88	40.62	127.59	-334.93	-403.62	3,141.58	3,055.09	86.50	36.321	
14,300.00	10,895.00	11,675.00	11,457.67	63.02	40.62	127.59	-334.93	-403.62	3,237.29	3,149.81	87.49	37.002	
14,400.00	10,895.00	11,675.00	11,457.67	64.17	40.62	127.59	-334.93	-403.62	3,333.26	3,244.76	88.49	37.667	
14,500.00	10,895.00	11,675.00	11,457.67	65.34	40.62	127.59	-334.93	-403.62	3,429.45	3,339.94	89.51	38.315	
14,600.00	10,895.00	11,675.00	11,457.67	66.51	40.62	127.59	-334.93	-403.62	3,525.85	3,435.32	90.53	38.947	
14,700.00	10,895.00	11,675.00	11,457.67	67.70	40.62	127.59	-334.93	-403.62	3,622.45	3,530.89	91.56	39.563	
14,800.00	10,895.00	11,675.00	11,457.67	68.89	40.62	127.59	-334.93	-403.62	3,719.23	3,626.63	92.60	40.164	
14,900.00	10,895.00	11,675.00	11,457.67	70.10	40.62	127.59	-334.93	-403.62	3,816.18	3,722.53	93.65	40.750	

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

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	***MD Reference:***	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. Com 17-35H - Wellbore #1 - Gyro Data Plan 5 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.46	-0.20	-25.10	25.12				
100.00	100.00	99.00	99.00	0.14	0.14	-90.46	-0.20	-25.10	25.10	24.82	0.28	90.807	
200.00	200.00	199.00	199.00	0.50	0.49	-90.46	-0.20	-25.10	25.10	24.11	0.99	25.324	
300.00	300.00	299.00	299.00	0.85	0.85	-90.46	-0.20	-25.10	25.10	23.39	1.71	14.695	
400.00	400.00	399.00	399.00	1.21	1.21	-90.46	-0.20	-25.10	25.10	22.68	2.43	10.351	
500.00	500.00	499.00	499.00	1.57	1.57	-90.46	-0.20	-25.10	25.10	21.96	3.14	7.989	
600.00	600.00	599.00	599.00	1.93	1.93	-90.46	-0.20	-25.10	25.10	21.24	3.86	6.505	
700.00	700.00	699.00	699.00	2.29	2.29	-90.46	-0.20	-25.10	25.10	20.52	4.58	5.485	
800.00	800.00	799.00	799.00	2.65	2.65	-90.46	-0.20	-25.10	25.10	19.81	5.29	4.742	
900.00	900.00	899.00	899.00	3.01	3.00	-90.46	-0.20	-25.10	25.10	19.09	6.01	4.177	
1,000.00	1,000.00	999.00	999.00	3.36	3.36	-90.46	-0.20	-25.10	25.10	18.37	6.73	3.732	
1,100.00	1,100.00	1,099.00	1,099.00	3.72	3.72	-90.46	-0.20	-25.10	25.10	17.66	7.44	3.372	
1,200.00	1,200.00	1,199.00	1,199.00	4.08	4.08	-90.46	-0.20	-25.10	25.10	16.94	8.16	3.076	
1,300.00	1,300.00	1,299.00	1,299.00	4.44	4.44	-90.46	-0.20	-25.10	25.10	16.22	8.88	2.827	
1,400.00	1,400.00	1,399.00	1,399.00	4.80	4.80	-90.46	-0.20	-25.10	25.10	15.51	9.59	2.616	
1,500.00	1,500.00	1,499.00	1,499.00	5.16	5.15	-90.46	-0.20	-25.10	25.10	14.79	10.31	2.434	
1,600.00	1,600.00	1,599.00	1,599.00	5.52	5.51	-90.46	-0.20	-25.10	25.10	14.07	11.03	2.276	
1,700.00	1,700.00	1,699.00	1,699.00	5.87	5.87	-90.46	-0.20	-25.10	25.10	13.36	11.75	2.137	
1,800.00	1,800.00	1,799.00	1,799.00	6.23	6.23	-90.46	-0.20	-25.10	25.10	12.64	12.46	2.014	
1,900.00	1,900.00	1,899.00	1,899.00	6.59	6.59	-90.46	-0.20	-25.10	25.10	11.92	13.18	1.905	
2,000.00	2,000.00	1,999.00	1,999.00	6.95	6.95	-90.46	-0.20	-25.10	25.10	11.20	13.90	1.806	CC, ES, SF
2,100.00	2,099.98	2,098.31	2,098.30	7.31	7.29	-94.17	-0.20	-26.37	26.45	11.84	14.60	1.811	
2,200.00	2,199.86	2,197.39	2,197.30	7.67	7.63	-102.42	-0.20	-30.20	30.98	15.69	15.30	2.025	
2,300.00	2,299.73	2,296.46	2,296.17	8.02	7.98	-107.96	-0.20	-36.48	38.48	22.49	15.99	2.406	
2,400.00	2,399.59	2,396.08	2,395.54	8.38	8.32	-120.89	-0.20	-43.43	46.92	30.22	16.69	2.811	
2,500.00	2,499.42	2,495.48	2,494.71	8.74	8.67	-153.70	-0.20	-50.37	57.70	40.33	17.37	3.323	
2,600.00	2,599.11	2,594.50	2,593.49	9.09	9.02	-170.78	-0.20	-57.27	71.62	53.60	18.02	3.975	
2,700.00	2,698.53	2,693.02	2,691.76	9.45	9.37	-178.98	-0.20	-64.15	88.67	70.02	18.65	4.755	
2,800.00	2,797.74	2,791.17	2,789.68	9.80	9.72	-178.45	-0.20	-70.99	107.66	88.34	19.32	5.572	
2,900.00	2,896.95	2,889.32	2,887.59	10.16	10.07	-177.53	-0.20	-77.84	126.71	106.70	20.01	6.333	
3,000.00	2,996.16	2,987.48	2,985.50	10.52	10.42	-176.86	-0.20	-84.69	145.79	125.09	20.70	7.043	
3,100.00	3,095.37	3,086.04	3,083.83	10.89	10.78	-176.32	-0.15	-91.55	164.85	143.46	21.39	7.706	
3,200.00	3,194.58	3,185.99	3,183.54	11.25	11.14	-175.40	1.62	-98.16	183.10	161.01	22.09	8.287	
3,300.00	3,293.79	3,280.45	3,277.66	11.62	11.49	-174.17	4.84	-105.47	202.01	179.23	22.78	8.867	
3,400.00	3,393.00	3,376.39	3,373.07	11.99	11.84	-172.80	8.93	-114.72	222.61	199.13	23.48	9.483	
3,500.00	3,492.21	3,474.07	3,470.18	12.36	12.21	-171.61	13.18	-124.35	243.51	219.34	24.18	10.072	
3,600.00	3,591.41	3,571.75	3,567.28	12.74	12.57	-170.60	17.44	-133.99	264.50	239.62	24.88	10.632	
3,700.00	3,690.62	3,669.42	3,664.39	13.11	12.94	-169.74	21.69	-143.63	285.55	259.97	25.58	11.162	
3,800.00	3,789.83	3,767.10	3,761.49	13.49	13.31	-169.00	25.94	-153.26	306.66	280.37	26.29	11.666	
3,900.00	3,889.04	3,864.77	3,858.60	13.86	13.67	-168.36	30.20	-162.90	327.80	300.81	26.99	12.145	
4,000.00	3,988.25	3,962.45	3,955.71	14.24	14.04	-167.79	34.45	-172.54	348.99	321.29	27.70	12.599	
4,100.00	4,087.46	4,060.13	4,052.81	14.62	14.42	-167.29	38.71	-182.17	370.20	341.79	28.41	13.032	
4,200.00	4,186.67	4,157.80	4,149.92	15.00	14.79	-166.84	42.96	-191.81	391.43	362.32	29.12	13.444	
4,300.00	4,285.88	4,255.48	4,247.03	15.38	15.16	-166.44	47.22	-201.44	412.69	382.87	29.82	13.837	
4,400.00	4,385.08	4,353.15	4,344.13	15.76	15.53	-166.08	51.47	-211.08	433.97	403.43	30.54	14.212	
4,500.00	4,484.29	4,450.83	4,441.24	16.15	15.91	-165.75	55.73	-220.72	455.25	424.01	31.25	14.570	
4,600.00	4,583.50	4,548.50	4,538.34	16.53	16.28	-165.45	59.98	-230.35	476.56	444.60	31.96	14.912	
4,700.00	4,682.71	4,646.18	4,635.45	16.91	16.66	-165.18	64.24	-239.99	497.87	465.20	32.67	15.239	
4,800.00	4,781.92	4,743.86	4,732.56	17.30	17.03	-164.93	68.49	-249.63	519.19	485.81	33.38	15.552	
4,900.00	4,881.13	4,841.53	4,829.66	17.68	17.41	-164.70	72.74	-259.26	540.53	506.43	34.10	15.852	
5,000.00	4,980.34	4,939.21	4,926.77	18.07	17.78	-164.48	77.00	-268.90	561.87	527.05	34.81	16.140	
5,100.00	5,079.54	5,036.88	5,023.88	18.45	18.16	-164.28	81.25	-278.53	583.21	547.69	35.53	16.416	

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

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Fed. Com 17-35H - Wellbore #1 - Gyro Data Plan 5

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	10,378.11	10,397.23	10,377.11	37.12	37.28	-91.18	137.41	-405.73	733.14	659.58	73.55	9.967	
10,500.00	10,477.95	10,497.07	10,476.95	37.46	37.63	89.28	137.41	-405.73	733.08	658.83	74.24	9.874	
10,551.44	10,528.52	10,547.65	10,527.52	37.61	37.81	90.00	137.41	-405.73	733.02	658.44	74.58	9.829	
10,600.00	10,575.10	10,594.23	10,574.10	37.76	37.98	91.01	137.41	-405.73	733.15	658.26	74.88	9.791	
10,700.00	10,665.37	10,684.49	10,664.37	38.02	38.29	93.75	137.41	-405.73	735.18	659.75	75.43	9.746	
10,800.00	10,744.80	10,763.93	10,743.80	38.23	38.57	96.61	137.41	-405.73	742.25	666.47	75.78	9.795	
10,900.00	10,809.93	10,829.06	10,808.93	38.38	38.80	98.50	137.41	-405.73	757.84	681.89	75.95	9.978	
11,000.00	10,857.92	10,877.04	10,856.92	38.49	38.97	98.39	137.41	-405.73	784.64	708.41	76.22	10.294	
11,100.00	10,886.65	10,905.78	10,885.65	38.65	39.07	95.45	137.41	-405.73	823.59	746.75	76.84	10.718	
11,200.00	10,895.01	10,914.13	10,894.01	38.84	39.10	90.00	137.41	-405.73	873.44	796.10	77.34	11.293	
11,300.00	10,895.00	10,914.13	10,894.00	39.06	39.10	90.00	137.41	-405.73	931.61	854.05	77.55	12.012	
11,400.00	10,895.00	11,966.01	11,489.01	39.33	41.71	129.06	-537.40	-403.96	944.21	878.00	66.21	14.260	
11,500.00	10,895.00	12,066.01	11,489.01	39.65	42.11	129.06	-637.40	-403.70	944.23	877.40	66.83	14.129	
11,600.00	10,895.00	12,166.01	11,489.01	40.02	42.57	129.06	-737.40	-403.44	944.24	876.71	67.53	13.982	
11,700.00	10,895.00	12,266.01	11,489.01	40.44	43.08	129.06	-837.40	-403.18	944.26	875.92	68.34	13.818	
11,800.00	10,895.00	12,366.01	11,489.01	40.90	43.65	129.06	-937.40	-402.92	944.27	875.04	69.23	13.640	
11,900.00	10,895.00	12,466.01	11,489.01	41.40	44.27	129.06	-1,037.40	-402.65	944.29	874.08	70.20	13.451	
12,000.00	10,895.00	12,566.01	11,489.01	41.96	44.95	129.06	-1,137.40	-402.39	944.30	873.04	71.26	13.251	
12,100.00	10,895.00	12,666.01	11,489.01	42.55	45.67	129.06	-1,237.40	-402.13	944.32	871.92	72.40	13.043	
12,200.00	10,895.00	12,766.01	11,489.01	43.18	46.45	129.06	-1,337.40	-401.87	944.33	870.72	73.61	12.829	
12,300.00	10,895.00	12,866.01	11,489.01	43.85	47.26	129.06	-1,437.40	-401.61	944.35	869.45	74.90	12.609	
12,400.00	10,895.00	12,966.01	11,489.01	44.56	48.13	129.05	-1,537.40	-401.34	944.36	868.11	76.25	12.386	
12,500.00	10,895.00	13,066.01	11,489.01	45.30	49.03	129.05	-1,637.40	-401.08	944.38	866.71	77.66	12.160	
12,600.00	10,895.00	13,166.01	11,489.01	46.08	49.97	129.05	-1,737.40	-400.82	944.39	865.25	79.14	11.933	
12,700.00	10,895.00	13,266.01	11,489.01	46.89	50.94	129.05	-1,837.40	-400.56	944.41	863.73	80.68	11.706	
12,800.00	10,895.00	13,366.01	11,489.01	47.73	51.96	129.05	-1,937.40	-400.30	944.42	862.16	82.26	11.480	
12,900.00	10,895.00	13,466.01	11,489.01	48.59	53.00	129.05	-2,037.39	-400.04	944.44	860.53	83.90	11.256	
13,000.00	10,895.00	13,566.01	11,489.01	49.49	54.07	129.05	-2,137.39	-399.77	944.45	858.86	85.59	11.034	
13,100.00	10,895.00	13,666.01	11,489.01	50.41	55.18	129.05	-2,237.39	-399.51	944.47	857.14	87.33	10.815	
13,200.00	10,895.00	13,766.01	11,489.01	51.35	56.31	129.05	-2,337.39	-399.25	944.48	855.38	89.10	10.600	
13,300.00	10,895.00	13,866.01	11,489.01	52.32	57.46	129.05	-2,437.39	-398.99	944.50	853.58	90.92	10.388	
13,400.00	10,895.00	13,966.01	11,489.01	53.31	58.64	129.05	-2,537.39	-398.73	944.51	851.74	92.78	10.181	
13,500.00	10,895.00	14,066.01	11,489.01	54.32	59.84	129.05	-2,637.39	-398.46	944.53	849.86	94.67	9.977	
13,600.00	10,895.00	14,166.01	11,489.01	55.35	61.07	129.05	-2,737.39	-398.20	944.54	847.95	96.59	9.779	
13,700.00	10,895.00	14,266.01	11,489.01	56.40	62.31	129.04	-2,837.39	-397.94	944.56	846.01	98.55	9.585	
13,800.00	10,895.00	14,366.01	11,489.01	57.46	63.58	129.04	-2,937.39	-397.68	944.57	844.04	100.53	9.396	
13,900.00	10,895.00	14,466.01	11,489.01	58.55	64.86	129.04	-3,037.39	-397.42	944.59	842.04	102.55	9.211	
14,000.00	10,895.00	14,566.01	11,489.01	59.64	66.15	129.04	-3,137.39	-397.16	944.60	840.02	104.59	9.032	
14,100.00	10,895.00	14,666.01	11,489.01	60.75	67.47	129.04	-3,237.39	-396.89	944.62	837.97	106.65	8.857	
14,200.00	10,895.00	14,766.01	11,489.01	61.88	68.79	129.04	-3,337.39	-396.63	944.63	835.89	108.74	8.687	
14,300.00	10,895.00	14,866.01	11,489.01	63.02	70.14	129.04	-3,437.39	-396.37	944.65	833.80	110.85	8.522	
14,400.00	10,895.00	14,966.01	11,489.01	64.17	71.49	129.04	-3,537.39	-396.11	944.66	831.68	112.98	8.361	
14,500.00	10,895.00	15,066.01	11,489.01	65.34	72.86	129.04	-3,637.39	-395.85	944.68	829.55	115.13	8.205	
14,600.00	10,895.00	15,166.01	11,489.01	66.51	74.24	129.04	-3,737.39	-395.59	944.69	827.39	117.30	8.054	
14,700.00	10,895.00	15,266.01	11,489.01	67.70	75.63	129.04	-3,837.39	-395.32	944.71	825.22	119.49	7.906	
14,800.00	10,895.00	15,366.01	11,489.01	68.89	77.03	129.04	-3,937.39	-395.06	944.72	823.03	121.69	7.763	
14,900.00	10,895.00	15,466.01	11,489.01	70.10	78.44	129.04	-4,037.39	-394.80	944.74	820.82	123.91	7.624	
15,000.00	10,895.00	15,566.01	11,489.01	71.31	79.87	129.04	-4,137.39	-394.54	944.75	818.60	126.15	7.489	
15,100.00	10,895.00	15,666.01	11,489.01	72.53	81.30	129.03	-4,237.39	-394.28	944.77	816.37	128.40	7.358	
15,200.00	10,895.00	15,766.01	11,489.01	73.76	82.73	129.03	-4,337.39	-394.01	944.78	814.12	130.66	7.231	
15,300.00	10,895.00	15,866.01	11,489.01	75.00	84.18	129.03	-4,437.39	-393.75	944.80	811.86	132.93	7.107	
15,400.00	10,895.00	15,966.01	11,489.01	76.25	85.63	129.03	-4,537.39	-393.49	944.81	809.59	135.22	6.987	

Scientific Drilling Int.

Anticollision Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Federal Com 17-37H - Wellbore #1 - Plan #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.54	0.20	24.80	24.80				
100.00	100.00	100.00	100.00	0.14	0.14	89.54	0.20	24.80	24.80	24.52	0.28	89.850	
200.00	200.00	200.00	200.00	0.50	0.50	89.54	0.20	24.80	24.80	23.81	0.99	24.976	
300.00	300.00	300.00	300.00	0.85	0.85	89.54	0.20	24.80	24.80	23.09	1.71	14.504	
400.00	400.00	400.00	400.00	1.21	1.21	89.54	0.20	24.80	24.80	22.37	2.43	10.219	
500.00	500.00	500.00	500.00	1.57	1.57	89.54	0.20	24.80	24.80	21.66	3.14	7.889	
600.00	600.00	600.00	600.00	1.93	1.93	89.54	0.20	24.80	24.80	20.94	3.86	6.424	
700.00	700.00	700.00	700.00	2.29	2.29	89.54	0.20	24.80	24.80	20.22	4.58	5.418	
800.00	800.00	800.00	800.00	2.65	2.65	89.54	0.20	24.80	24.80	19.51	5.29	4.684	
900.00	900.00	900.00	900.00	3.01	3.01	89.54	0.20	24.80	24.80	18.79	6.01	4.126	
1,000.00	1,000.00	1,000.00	1,000.00	3.36	3.36	89.54	0.20	24.80	24.80	18.07	6.73	3.686	
1,100.00	1,100.00	1,100.00	1,100.00	3.72	3.72	89.54	0.20	24.80	24.80	17.36	7.45	3.331	
1,200.00	1,200.00	1,200.00	1,200.00	4.08	4.08	89.54	0.20	24.80	24.80	16.64	8.16	3.038	
1,300.00	1,300.00	1,300.00	1,300.00	4.44	4.44	89.54	0.20	24.80	24.80	15.92	8.88	2.793	
1,400.00	1,400.00	1,400.00	1,400.00	4.80	4.80	89.54	0.20	24.80	24.80	15.20	9.60	2.584	
1,500.00	1,500.00	1,500.00	1,500.00	5.16	5.16	89.54	0.20	24.80	24.80	14.49	10.31	2.405	
1,600.00	1,600.00	1,600.00	1,600.00	5.52	5.52	89.54	0.20	24.80	24.80	13.77	11.03	2.248	
1,700.00	1,700.00	1,700.00	1,700.00	5.87	5.87	89.54	0.20	24.80	24.80	13.05	11.75	2.111	
1,800.00	1,800.00	1,800.00	1,800.00	6.23	6.23	89.54	0.20	24.80	24.80	12.34	12.46	1.990	
1,900.00	1,900.00	1,900.00	1,900.00	6.59	6.59	89.54	0.20	24.80	24.80	11.62	13.18	1.882	
2,000.00	2,000.00	2,000.00	2,000.00	6.95	6.95	89.54	0.20	24.80	24.80	10.90	13.90	1.784	CC, ES, SF
2,100.00	2,099.98	2,099.11	2,099.09	7.31	7.30	92.57	0.53	26.48	26.53	11.92	14.60	1.816	
2,200.00	2,199.86	2,197.95	2,197.79	7.67	7.64	98.89	1.50	31.51	31.98	16.68	15.30	2.090	
2,300.00	2,299.73	2,296.36	2,295.84	8.02	7.98	101.98	3.11	39.84	40.96	24.96	16.00	2.560	
2,400.00	2,399.59	2,394.51	2,393.27	8.38	8.33	92.93	5.33	51.36	52.94	36.24	16.70	3.170	
2,500.00	2,499.42	2,493.95	2,491.87	8.74	8.69	61.70	7.79	64.06	63.44	46.05	17.39	3.647	
2,600.00	2,599.11	2,593.69	2,590.76	9.09	9.05	45.01	10.25	76.81	70.52	52.45	18.07	3.903	
2,700.00	2,698.53	2,693.61	2,689.83	9.45	9.41	36.77	12.72	89.58	74.19	55.46	18.73	3.961	
2,800.00	2,797.74	2,793.58	2,788.95	9.80	9.78	37.34	15.19	102.35	75.81	56.38	19.43	3.901	
2,900.00	2,896.95	2,893.55	2,888.07	10.16	10.15	38.61	17.65	115.13	77.46	57.32	20.15	3.845	
3,000.00	2,996.16	2,993.53	2,987.20	10.52	10.52	39.83	20.12	127.90	79.15	58.28	20.86	3.794	
3,100.00	3,095.37	3,093.50	3,086.32	10.89	10.89	41.00	22.59	140.67	80.86	59.28	21.58	3.746	
3,200.00	3,194.58	3,193.47	3,185.44	11.25	11.27	42.12	25.06	153.45	82.61	60.31	22.31	3.703	
3,300.00	3,293.79	3,293.44	3,284.56	11.62	11.64	43.19	27.53	166.22	84.40	61.36	23.04	3.664	
3,400.00	3,393.00	3,393.41	3,383.68	11.99	12.02	44.22	30.00	179.00	86.20	62.44	23.77	3.627	
3,500.00	3,492.21	3,493.39	3,482.80	12.36	12.40	45.21	32.47	191.77	88.04	63.54	24.50	3.593	
3,600.00	3,591.41	3,593.36	3,581.93	12.74	12.78	46.15	34.93	204.55	89.90	64.66	25.24	3.562	
3,700.00	3,690.62	3,693.33	3,681.05	13.11	13.17	47.06	37.40	217.32	91.78	65.81	25.98	3.533	
3,800.00	3,789.83	3,793.30	3,780.17	13.49	13.55	47.93	39.87	230.10	93.69	66.97	26.72	3.507	
3,900.00	3,889.04	3,893.27	3,879.29	13.86	13.93	48.76	42.34	242.87	95.62	68.15	27.46	3.482	
4,000.00	3,988.25	3,993.25	3,978.41	14.24	14.32	49.56	44.81	255.65	97.56	69.35	28.21	3.459	
4,100.00	4,087.46	4,093.22	4,077.53	14.62	14.70	50.33	47.28	268.42	99.53	70.57	28.96	3.437	
4,200.00	4,186.67	4,193.19	4,176.66	15.00	15.09	51.08	49.74	281.19	101.51	71.80	29.71	3.417	
4,300.00	4,285.88	4,293.16	4,275.78	15.38	15.48	51.79	52.21	293.97	103.51	73.05	30.46	3.398	
4,400.00	4,385.08	4,393.13	4,374.90	15.76	15.87	52.47	54.68	306.74	105.52	74.31	31.22	3.380	
4,500.00	4,484.29	4,493.11	4,474.02	16.15	16.26	53.13	57.15	319.52	107.55	75.58	31.97	3.364	
4,600.00	4,583.50	4,593.08	4,573.14	16.53	16.64	53.77	59.62	332.29	109.59	76.86	32.73	3.348	
4,700.00	4,682.71	4,693.05	4,672.26	16.91	17.03	54.38	62.09	345.07	111.65	78.16	33.49	3.334	
4,800.00	4,781.92	4,793.02	4,771.39	17.30	17.42	54.97	64.56	357.84	113.72	79.47	34.25	3.320	
4,900.00	4,881.13	4,892.99	4,870.51	17.68	17.82	55.53	67.02	370.62	115.79	80.78	35.01	3.307	
5,000.00	4,980.34	4,992.97	4,969.63	18.07	18.21	56.08	69.49	383.39	117.88	82.11	35.78	3.295	
5,100.00	5,079.54	5,092.94	5,068.75	18.45	18.60	56.61	71.96	396.17	119.98	83.44	36.54	3.284	

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

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design RDX Federal Com 17 Pad - RDX Federal Com 17-37H - Wellbore #1 - Plan #1

Offset Site Error: 0.00 usft

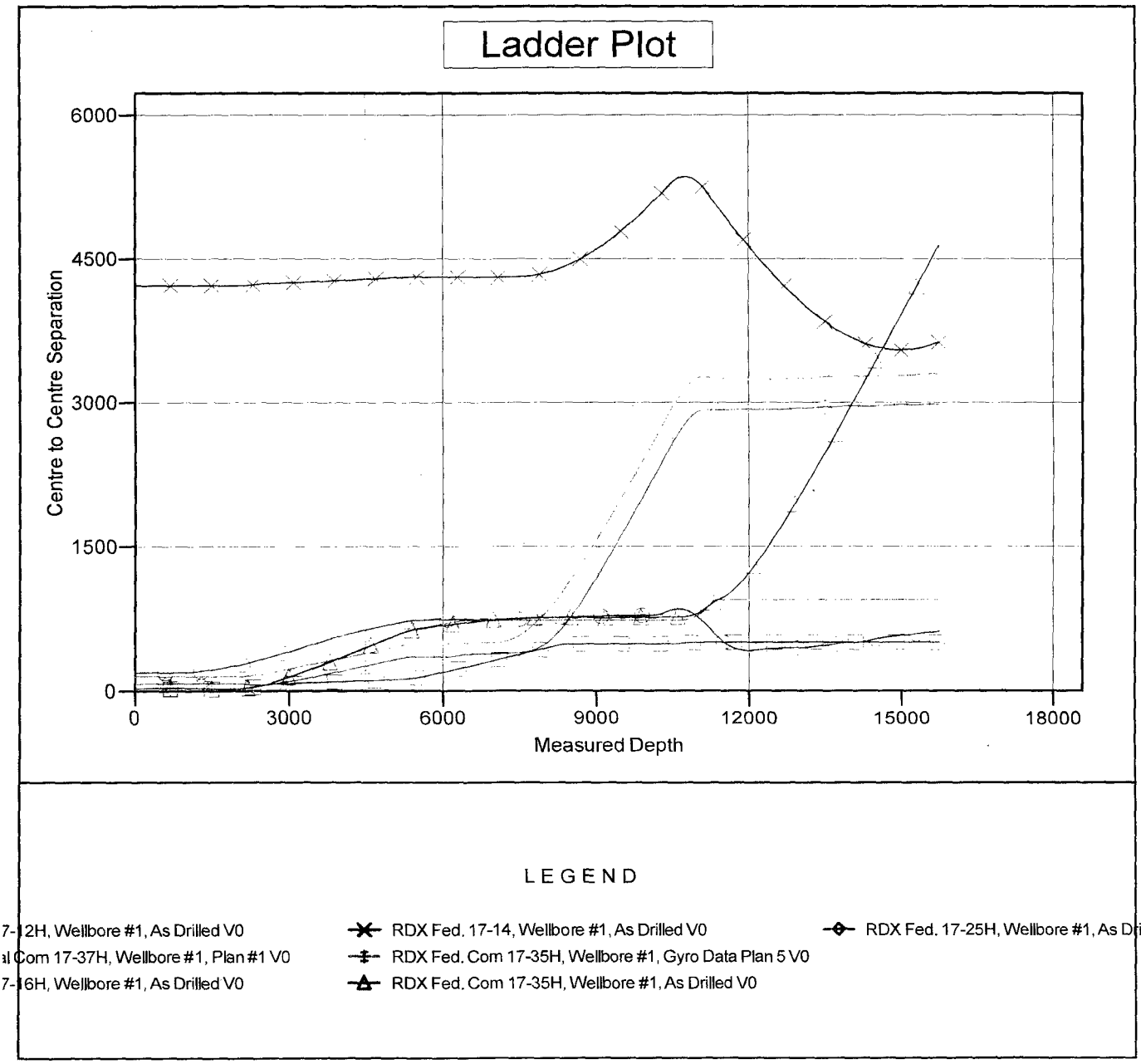
Survey Program: 0-MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	10,278.11	10,329.59	10,278.10	36.77	38.09	89.98	152.74	814.25	487.00	413.89	73.11	6.661	
10,319.01	10,297.12	10,348.55	10,297.06	36.84	38.15	90.03	152.26	814.25	487.00	413.76	73.24	6.649	
10,400.00	10,378.11	10,427.87	10,375.64	37.12	38.39	91.22	142.14	814.27	487.14	413.35	73.79	6.601	
10,500.00	10,477.95	10,519.53	10,462.88	37.46	38.65	-85.63	114.46	814.33	488.51	414.05	74.46	6.561	
10,600.00	10,575.10	10,606.67	10,539.47	37.76	38.86	-82.66	73.17	814.43	491.23	416.16	75.07	6.544	
10,700.00	10,665.37	10,690.57	10,604.96	38.02	39.03	-80.01	20.90	814.54	494.77	419.26	75.51	6.552	
10,800.00	10,744.80	10,771.99	10,658.84	38.23	39.16	-77.76	-40.02	814.68	498.56	422.86	75.69	6.586	
10,900.00	10,809.93	10,850.00	10,700.04	38.38	39.25	-75.99	-106.15	814.82	502.07	426.42	75.65	6.636	
11,000.00	10,857.92	10,929.88	10,730.51	38.49	39.34	-74.69	-179.89	814.99	504.85	429.31	75.54	6.683	
11,100.00	10,886.65	11,007.37	10,747.93	38.65	39.42	-73.94	-255.31	815.15	506.56	431.00	75.55	6.705	
11,200.00	10,895.01	11,086.71	10,753.01	38.84	39.53	-73.74	-334.40	815.33	507.00	431.15	75.85	6.684	
11,300.00	10,895.00	11,186.71	10,753.00	39.06	39.72	-73.73	-434.40	815.55	506.94	430.63	76.32	6.643	
11,400.00	10,895.00	11,286.71	10,753.00	39.33	39.97	-73.73	-534.40	815.77	506.89	430.01	76.88	6.593	
11,500.00	10,895.00	11,386.71	10,753.00	39.65	40.27	-73.73	-634.40	815.99	506.83	429.29	77.54	6.537	
11,600.00	10,895.00	11,486.71	10,753.00	40.02	40.62	-73.73	-734.40	816.22	506.77	428.48	78.29	6.473	
11,700.00	10,895.00	11,586.71	10,753.00	40.44	41.03	-73.73	-834.40	816.44	506.72	427.57	79.14	6.402	
11,800.00	10,895.00	11,686.71	10,753.00	40.90	41.49	-73.72	-934.40	816.66	506.66	426.57	80.08	6.327	
11,900.00	10,895.00	11,786.71	10,753.00	41.40	41.99	-73.72	-1,034.40	816.88	506.60	425.49	81.11	6.246	
12,000.00	10,895.00	11,886.71	10,753.00	41.96	42.53	-73.72	-1,134.40	817.10	506.54	424.32	82.22	6.161	
12,100.00	10,895.00	11,986.71	10,753.00	42.55	43.12	-73.72	-1,234.40	817.32	506.49	423.08	83.41	6.072	
12,200.00	10,895.00	12,086.71	10,753.00	43.18	43.75	-73.72	-1,334.40	817.55	506.43	421.75	84.68	5.981	
12,300.00	10,895.00	12,186.71	10,753.00	43.85	44.42	-73.71	-1,434.40	817.77	506.37	420.35	86.02	5.887	
12,400.00	10,895.00	12,286.71	10,753.00	44.56	45.12	-73.71	-1,534.40	817.99	506.32	418.88	87.43	5.791	
12,500.00	10,895.00	12,386.71	10,753.00	45.30	45.86	-73.71	-1,634.40	818.21	506.26	417.35	88.91	5.694	
12,600.00	10,895.00	12,486.71	10,753.00	46.08	46.63	-73.71	-1,734.40	818.43	506.20	415.75	90.45	5.596	
12,700.00	10,895.00	12,586.71	10,753.00	46.89	47.44	-73.71	-1,834.40	818.65	506.14	414.09	92.05	5.498	
12,800.00	10,895.00	12,686.71	10,753.00	47.73	48.27	-73.70	-1,934.40	818.88	506.09	412.38	93.71	5.400	
12,900.00	10,895.00	12,786.71	10,753.00	48.59	49.13	-73.70	-2,034.40	819.10	506.03	410.60	95.43	5.303	
13,000.00	10,895.00	12,886.71	10,753.00	49.49	50.02	-73.70	-2,134.40	819.32	505.97	408.78	97.19	5.206	
13,100.00	10,895.00	12,986.71	10,753.00	50.41	50.94	-73.70	-2,234.40	819.54	505.92	406.91	99.00	5.110	
13,200.00	10,895.00	13,086.71	10,753.00	51.35	51.88	-73.70	-2,334.40	819.76	505.86	405.00	100.86	5.015	
13,300.00	10,895.00	13,186.71	10,753.00	52.32	52.84	-73.70	-2,434.40	819.98	505.80	403.03	102.77	4.922	
13,400.00	10,895.00	13,286.71	10,753.00	53.31	53.83	-73.69	-2,534.40	820.21	505.75	401.03	104.71	4.830	
13,500.00	10,895.00	13,386.71	10,753.00	54.32	54.83	-73.69	-2,634.40	820.43	505.69	398.99	106.70	4.740	
13,600.00	10,895.00	13,486.71	10,753.00	55.35	55.86	-73.69	-2,734.40	820.65	505.63	396.92	108.72	4.651	
13,700.00	10,895.00	13,586.71	10,753.00	56.40	56.90	-73.69	-2,834.40	820.87	505.57	394.80	110.77	4.564	
13,800.00	10,895.00	13,686.71	10,753.00	57.46	57.96	-73.69	-2,934.40	821.09	505.52	392.66	112.86	4.479	
13,900.00	10,895.00	13,786.71	10,753.00	58.55	59.04	-73.68	-3,034.40	821.31	505.46	390.48	114.98	4.396	
14,000.00	10,895.00	13,886.71	10,753.00	59.64	60.13	-73.68	-3,134.40	821.53	505.40	388.28	117.12	4.315	
14,100.00	10,895.00	13,986.71	10,753.00	60.75	61.24	-73.68	-3,234.39	821.76	505.35	386.05	119.30	4.236	
14,200.00	10,895.00	14,086.71	10,753.00	61.88	62.36	-73.68	-3,334.39	821.98	505.29	383.79	121.50	4.159	
14,300.00	10,895.00	14,186.71	10,753.00	63.02	63.49	-73.68	-3,434.39	822.20	505.23	381.50	123.73	4.083	
14,400.00	10,895.00	14,286.71	10,753.00	64.17	64.64	-73.67	-3,534.39	822.42	505.18	379.20	125.98	4.010	
14,500.00	10,895.00	14,386.71	10,753.00	65.34	65.80	-73.67	-3,634.39	822.64	505.12	376.87	128.25	3.939	
14,600.00	10,895.00	14,486.71	10,753.00	66.51	66.97	-73.67	-3,734.39	822.86	505.06	374.52	130.55	3.869	
14,700.00	10,895.00	14,586.71	10,753.00	67.70	68.15	-73.67	-3,834.39	823.09	505.00	372.14	132.86	3.801	
14,800.00	10,895.00	14,686.71	10,753.00	68.89	69.34	-73.67	-3,934.39	823.31	504.95	369.75	135.19	3.735	
14,900.00	10,895.00	14,786.71	10,753.00	70.10	70.54	-73.67	-4,034.39	823.53	504.89	367.35	137.54	3.671	
15,000.00	10,895.00	14,886.71	10,753.00	71.31	71.75	-73.66	-4,134.39	823.75	504.83	364.92	139.91	3.608	
15,100.00	10,895.00	14,986.71	10,753.00	72.53	72.97	-73.66	-4,234.39	823.97	504.78	362.48	142.30	3.547	
15,200.00	10,895.00	15,086.71	10,753.00	73.76	74.20	-73.66	-4,334.39	824.19	504.72	360.02	144.70	3.488	
15,300.00	10,895.00	15,186.71	10,753.00	75.00	75.43	-73.66	-4,434.39	824.42	504.66	357.55	147.11	3.431	

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well RDX Federal Com 17-36H
Project:	Eddy County, New Mexico NAD 83	**TVD Reference:**	KB @ 3094.00usft (Orion Aires)
Reference Site:	RDX Federal Com 17 Pad	**MD Reference:**	KB @ 3094.00usft (Orion Aires)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	RDX Federal Com 17-36H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	***Output errors are at***	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	Midland District
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 3094.00usft (Orion Aires)	Coordinates are relative to: RDX Federal Com 17-36H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.22°



PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RKI Exploration & Production, LLC.
LEASE NO.:	NMNM020965
WELL NAME & NO.:	36H- RDX Federal Com 17
SURFACE HOLE FOOTAGE:	200'/N & 735'/W
BOTTOM HOLE FOOTAGE	230'/S & 1064'/W
LOCATION:	Section 17, T. 26 S., R. 30 E., NMPM
COUNTY:	Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If**

available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.
Medium Cave/Karst
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Rustler, Red Beds and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately 787 feet (**in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt**) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of

six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Operator has proposed DV tool at depth of 5500'. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve approved top of cement on the next stage.

b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Medium Cave/Karst: If cement does not circulate to surface on the intermediate casing, the cement on the production casing must come to surface.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **7** production casing is:

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

4. The minimum required fill of cement behind the **4-1/2** inch production liner is:

   ☒ Cement should tie-back to the top of the liner. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. **Operator has proposed a multi-bowl wellhead assembly that has a weld on head with no o-ring seals. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.**

   a. **Wellhead manufacturer is supplying the test plug/retrieval tool for the operator's third party tester to use during the BOP/BOPE test. Operator shall use the supplied test plug/retrieval tool.**
   b. **Operator shall install the wear bushing required by the wellhead manufacturer. This wear bushing shall be installed by using the test plug/retrieval tool.**
   c. **Wellhead manufacturer representative shall be on location when the intermediate casing mandrel is landed. Operator shall submit copy of manufacturer's wellsite report with subsequent report.**
   d. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    a. The tests shall be done by an independent service company utilizing a test plug.

    b. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

    c. The results of the test shall be reported to the appropriate BLM office.

    d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

    e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

    f. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW 082817