

WPX Energy

Eddy County, New Mexico (NAD 83)

Collie 35-34-22-27 Fee Pad

Collie 35-34-22-27 Fee 401H

API: ???

ST01

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 04 2019

Plan: Plan #2 ST01

30-015-45643

RECEIVED

Standard Planning Report

28 January, 2019



Scientific Drilling

www.scientificdrilling.com

Scientific Drilling, Intl

Planning Report

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

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		Collie 35-34-22-27 Fee Pad			
Site Position:		Northing:	490,402.10 usft	Latitude:	32.348054
From:	Map	Easting:	597,781.90 usft	Longitude:	-104.150554
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.10 °

Well	Collie 35-34-22-27 Fee 401H					
Well Position	+N/-S	0.00 usft	Northing:	490,402.10 usft	Latitude:	32.348054
	+E/-W	0.00 usft	Easting:	597,781.90 usft	Longitude:	-104.150554
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,079.00 usft

Wellbore	ST01				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	1/23/2019	7.23	60.08	47,938

Design	Plan #2 ST01				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	8,600.00	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(bearing)	
	0.00	0.00	0.00	270.00	

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
8,600.00	0.00	0.00	8,386.52	1,255.75	-452.65	0.00	0.00	0.00	0.00	
8,877.52	0.00	0.00	8,664.04	1,255.75	-452.65	0.00	0.00	0.00	0.00	
9,777.52	90.00	270.00	9,237.00	1,255.75	-1,025.61	10.00	10.00	0.00	270.00	
14,927.52	90.00	270.00	9,237.00	1,255.75	-6,175.61	0.00	0.00	0.00	0.00	
15,427.52	90.00	275.00	9,237.00	1,277.55	-6,674.97	1.00	0.00	1.00	90.00	
17,677.52	90.00	275.00	9,237.00	1,473.65	-8,916.41	0.00	0.00	0.00	0.00	
18,177.52	90.00	270.00	9,237.00	1,495.46	-9,415.78	1.00	0.00	-1.00	-90.00	
19,481.94	90.00	270.00	9,237.00	1,495.46	-10,720.20	0.00	0.00	0.00	0.00	Collie 32-401H BHL

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Well:	Collie 35-34-22-27 Fee 401H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	Plan #2 ST01		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	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
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	2.00	340.18	2,799.98	1.64	-0.59	0.59	2.00	2.00	0.00
2,900.00	4.00	340.18	2,899.84	6.56	-2.37	2.37	2.00	2.00	0.00
3,000.00	6.00	340.18	2,999.45	14.76	-5.32	5.32	2.00	2.00	0.00
3,100.00	8.00	340.18	3,098.70	26.23	-9.45	9.45	2.00	2.00	0.00
3,200.00	10.00	340.18	3,197.47	40.94	-14.76	14.76	2.00	2.00	0.00
3,300.00	12.00	340.18	3,295.62	58.89	-21.23	21.23	2.00	2.00	0.00
3,400.00	14.00	340.18	3,393.06	80.05	-28.86	28.86	2.00	2.00	0.00
3,500.00	16.00	340.18	3,489.64	104.40	-37.63	37.63	2.00	2.00	0.00
3,600.00	18.00	340.18	3,585.27	131.90	-47.55	47.55	2.00	2.00	0.00
3,692.53	19.85	340.18	3,672.79	160.14	-57.72	57.72	2.00	2.00	0.00
3,700.00	19.85	340.18	3,679.82	162.52	-58.58	58.58	0.00	0.00	0.00
3,800.00	19.85	340.18	3,773.88	194.47	-70.10	70.10	0.00	0.00	0.00
3,900.00	19.85	340.18	3,867.94	226.41	-81.61	81.61	0.00	0.00	0.00
4,000.00	19.85	340.18	3,961.99	258.36	-93.13	93.13	0.00	0.00	0.00
4,100.00	19.85	340.18	4,056.05	290.30	-104.64	104.64	0.00	0.00	0.00
4,200.00	19.85	340.18	4,150.11	322.25	-116.16	116.16	0.00	0.00	0.00
4,300.00	19.85	340.18	4,244.17	354.19	-127.67	127.67	0.00	0.00	0.00
4,400.00	19.85	340.18	4,338.23	386.14	-139.19	139.19	0.00	0.00	0.00
4,500.00	19.85	340.18	4,432.28	418.08	-150.70	150.70	0.00	0.00	0.00
4,600.00	19.85	340.18	4,526.34	450.03	-162.22	162.22	0.00	0.00	0.00
4,700.00	19.85	340.18	4,620.40	481.97	-173.73	173.73	0.00	0.00	0.00
4,800.00	19.85	340.18	4,714.46	513.92	-185.25	185.25	0.00	0.00	0.00
4,900.00	19.85	340.18	4,808.52	545.86	-196.76	196.76	0.00	0.00	0.00
5,000.00	19.85	340.18	4,902.57	577.81	-208.28	208.28	0.00	0.00	0.00
5,100.00	19.85	340.18	4,996.63	609.75	-219.79	219.79	0.00	0.00	0.00
5,200.00	19.85	340.18	5,090.69	641.69	-231.31	231.31	0.00	0.00	0.00

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Planning Report

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 Well: Collie 35-34-22-27 Fee 401H
 Wellbore: ST01
 Design: Plan #2 ST01

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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
5,300.00	19.85	340.18	5,184.75	673.64	-242.82	242.82	0.00	0.00	0.00
5,400.00	19.85	340.18	5,278.81	705.58	-254.34	254.34	0.00	0.00	0.00
5,500.00	19.85	340.18	5,372.87	737.53	-265.85	265.85	0.00	0.00	0.00
5,600.00	19.85	340.18	5,466.92	769.47	-277.37	277.37	0.00	0.00	0.00
5,700.00	19.85	340.18	5,560.98	801.42	-288.88	288.88	0.00	0.00	0.00
5,800.00	19.85	340.18	5,655.04	833.36	-300.40	300.40	0.00	0.00	0.00
5,900.00	19.85	340.18	5,749.10	865.31	-311.91	311.91	0.00	0.00	0.00
6,000.00	19.85	340.18	5,843.16	897.25	-323.43	323.43	0.00	0.00	0.00
6,100.00	19.85	340.18	5,937.21	929.20	-334.94	334.94	0.00	0.00	0.00
6,200.00	19.85	340.18	6,031.27	961.14	-346.46	346.46	0.00	0.00	0.00
6,300.00	19.85	340.18	6,125.33	993.09	-357.97	357.97	0.00	0.00	0.00
6,400.00	19.85	340.18	6,219.39	1,025.03	-369.49	369.49	0.00	0.00	0.00
6,500.00	19.85	340.18	6,313.45	1,056.98	-381.00	381.00	0.00	0.00	0.00
6,600.00	19.85	340.18	6,407.51	1,088.92	-392.51	392.51	0.00	0.00	0.00
6,620.95	19.85	340.18	6,427.21	1,095.61	-394.93	394.93	0.00	0.00	0.00
6,700.00	18.27	340.18	6,501.92	1,119.90	-403.68	403.68	2.00	-2.00	0.00
6,800.00	16.27	340.18	6,597.41	1,147.83	-413.75	413.75	2.00	-2.00	0.00
6,900.00	14.27	340.18	6,693.88	1,172.60	-422.68	422.68	2.00	-2.00	0.00
7,000.00	12.27	340.18	6,791.20	1,194.19	-430.46	430.46	2.00	-2.00	0.00
7,100.00	10.27	340.18	6,889.27	1,212.58	-437.09	437.09	2.00	-2.00	0.00
7,200.00	8.27	340.18	6,987.96	1,227.73	-442.55	442.55	2.00	-2.00	0.00
7,300.00	6.27	340.18	7,087.15	1,239.63	-446.84	446.84	2.00	-2.00	0.00
7,400.00	4.27	340.18	7,186.72	1,248.27	-449.95	449.95	2.00	-2.00	0.00
7,500.00	2.27	340.18	7,286.55	1,253.64	-451.89	451.89	2.00	-2.00	0.00
7,600.00	0.27	340.18	7,386.52	1,255.72	-452.64	452.64	2.00	-2.00	0.00
7,613.48	0.00	0.00	7,400.00	1,255.75	-452.65	452.65	2.00	-2.00	0.00
7,700.00	0.00	0.00	7,486.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
7,800.00	0.00	0.00	7,586.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
7,900.00	0.00	0.00	7,686.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,000.00	0.00	0.00	7,786.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,100.00	0.00	0.00	7,886.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,200.00	0.00	0.00	7,986.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,300.00	0.00	0.00	8,086.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,400.00	0.00	0.00	8,186.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,500.00	0.00	0.00	8,286.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,600.00	0.00	0.00	8,386.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,700.00	0.00	0.00	8,486.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,800.00	0.00	0.00	8,586.52	1,255.75	-452.65	452.65	0.00	0.00	0.00
8,877.52	0.00	0.00	8,684.04	1,255.75	-452.65	452.65	0.00	0.00	0.00
KOP									
8,900.00	2.25	270.00	8,686.52	1,255.75	-453.09	453.09	10.00	10.00	0.00
8,950.00	7.25	270.00	8,736.33	1,255.75	-457.23	457.23	10.00	10.00	0.00
9,000.00	12.25	270.00	8,785.59	1,255.75	-465.69	465.69	10.00	10.00	0.00
9,020.97	14.35	270.00	8,806.00	1,255.75	-470.52	470.52	10.00	10.00	0.00
3rd Bone Spring Lime									
9,050.00	17.25	270.00	8,833.93	1,255.75	-478.42	478.42	10.00	10.00	0.00
9,100.00	22.25	270.00	8,880.97	1,255.75	-495.31	495.31	10.00	10.00	0.00
9,150.00	27.25	270.00	8,926.37	1,255.75	-516.23	516.23	10.00	10.00	0.00
9,200.00	32.25	270.00	8,969.76	1,255.75	-541.03	541.03	10.00	10.00	0.00
9,250.00	37.25	270.00	9,010.83	1,255.75	-569.52	569.52	10.00	10.00	0.00
9,300.00	42.25	270.00	9,049.27	1,255.75	-601.48	601.48	10.00	10.00	0.00
9,350.00	47.25	270.00	9,084.76	1,255.75	-636.67	636.67	10.00	10.00	0.00
9,380.71	50.32	270.00	9,105.00	1,255.75	-659.77	659.77	10.00	10.00	0.00

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Design:	Plan #2 ST01		

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)
3rd Bone Spring Sand									
9,400.00	52.25	270.00	9,117.06	1,255.75	-674.82	674.82	10.00	10.00	0.00
9,425.12	54.76	270.00	9,132.00	1,255.75	-695.01	695.01	10.00	10.00	0.00
Wolfcamp Top									
9,450.00	57.25	270.00	9,145.91	1,255.75	-715.64	715.64	10.00	10.00	0.00
9,470.16	59.26	270.00	9,156.52	1,255.75	-732.78	732.78	10.00	10.00	0.00
Collie 32-401H FTP									
9,500.00	62.25	270.00	9,171.09	1,255.75	-758.82	758.82	10.00	10.00	0.00
9,550.00	67.25	270.00	9,192.42	1,255.75	-804.02	804.02	10.00	10.00	0.00
9,594.45	71.69	270.00	9,208.00	1,255.75	-845.64	845.64	10.00	10.00	0.00
WC_X									
9,600.00	72.25	270.00	9,209.72	1,255.75	-850.92	850.92	10.00	10.00	0.00
9,629.56	75.20	270.00	9,218.00	1,255.75	-879.29	879.29	10.00	10.00	0.00
WC_Y									
9,650.00	77.25	270.00	9,222.87	1,255.75	-899.14	899.14	10.00	10.00	0.00
9,670.32	79.28	270.00	9,227.00	1,255.75	-919.04	919.04	10.00	10.00	0.00
Top Target									
9,700.00	82.25	270.00	9,231.76	1,255.75	-948.33	948.33	10.00	10.00	0.00
9,709.79	83.23	270.00	9,233.00	1,255.75	-958.04	958.04	10.00	10.00	0.00
Landing Point									
9,750.00	87.25	270.00	9,236.34	1,255.75	-998.10	998.10	10.00	10.00	0.00
9,777.52	90.00	270.00	9,237.00	1,255.75	-1,025.61	1,025.61	10.00	10.00	0.00
9,800.00	90.00	270.00	9,237.00	1,255.75	-1,048.09	1,048.09	0.00	0.00	0.00
9,900.00	90.00	270.00	9,237.00	1,255.75	-1,148.09	1,148.09	0.00	0.00	0.00
10,000.00	90.00	270.00	9,237.00	1,255.75	-1,248.09	1,248.09	0.00	0.00	0.00
10,100.00	90.00	270.00	9,237.00	1,255.75	-1,348.09	1,348.09	0.00	0.00	0.00
10,200.00	90.00	270.00	9,237.00	1,255.75	-1,448.09	1,448.09	0.00	0.00	0.00
10,300.00	90.00	270.00	9,237.00	1,255.75	-1,548.09	1,548.09	0.00	0.00	0.00
10,400.00	90.00	270.00	9,237.00	1,255.75	-1,648.09	1,648.09	0.00	0.00	0.00
10,500.00	90.00	270.00	9,237.00	1,255.75	-1,748.09	1,748.09	0.00	0.00	0.00
10,600.00	90.00	270.00	9,237.00	1,255.75	-1,848.09	1,848.09	0.00	0.00	0.00
10,700.00	90.00	270.00	9,237.00	1,255.75	-1,948.09	1,948.09	0.00	0.00	0.00
10,800.00	90.00	270.00	9,237.00	1,255.75	-2,048.09	2,048.09	0.00	0.00	0.00
10,900.00	90.00	270.00	9,237.00	1,255.75	-2,148.09	2,148.09	0.00	0.00	0.00
11,000.00	90.00	270.00	9,237.00	1,255.75	-2,248.09	2,248.09	0.00	0.00	0.00
11,100.00	90.00	270.00	9,237.00	1,255.75	-2,348.09	2,348.09	0.00	0.00	0.00
11,200.00	90.00	270.00	9,237.00	1,255.75	-2,448.09	2,448.09	0.00	0.00	0.00
11,300.00	90.00	270.00	9,237.00	1,255.75	-2,548.09	2,548.09	0.00	0.00	0.00
11,400.00	90.00	270.00	9,237.00	1,255.75	-2,648.09	2,648.09	0.00	0.00	0.00
11,500.00	90.00	270.00	9,237.00	1,255.75	-2,748.09	2,748.09	0.00	0.00	0.00
11,600.00	90.00	270.00	9,237.00	1,255.75	-2,848.09	2,848.09	0.00	0.00	0.00
11,700.00	90.00	270.00	9,237.00	1,255.75	-2,948.09	2,948.09	0.00	0.00	0.00
11,800.00	90.00	270.00	9,237.00	1,255.75	-3,048.09	3,048.09	0.00	0.00	0.00
11,900.00	90.00	270.00	9,237.00	1,255.75	-3,148.09	3,148.09	0.00	0.00	0.00
12,000.00	90.00	270.00	9,237.00	1,255.75	-3,248.09	3,248.09	0.00	0.00	0.00
12,100.00	90.00	270.00	9,237.00	1,255.75	-3,348.09	3,348.09	0.00	0.00	0.00
12,200.00	90.00	270.00	9,237.00	1,255.75	-3,448.09	3,448.09	0.00	0.00	0.00
12,300.00	90.00	270.00	9,237.00	1,255.75	-3,548.09	3,548.09	0.00	0.00	0.00
12,400.00	90.00	270.00	9,237.00	1,255.75	-3,648.09	3,648.09	0.00	0.00	0.00
12,500.00	90.00	270.00	9,237.00	1,255.75	-3,748.09	3,748.09	0.00	0.00	0.00
12,600.00	90.00	270.00	9,237.00	1,255.75	-3,848.09	3,848.09	0.00	0.00	0.00
12,700.00	90.00	270.00	9,237.00	1,255.75	-3,948.09	3,948.09	0.00	0.00	0.00
12,800.00	90.00	270.00	9,237.00	1,255.75	-4,048.09	4,048.09	0.00	0.00	0.00

Scientific Drilling, Intl

Planning Report

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

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
12,900.00	90.00	270.00	9,237.00	1,255.75	-4,148.09	4,148.09	0.00	0.00	0.00
13,000.00	90.00	270.00	9,237.00	1,255.75	-4,248.09	4,248.09	0.00	0.00	0.00
13,100.00	90.00	270.00	9,237.00	1,255.75	-4,348.09	4,348.09	0.00	0.00	0.00
13,200.00	90.00	270.00	9,237.00	1,255.75	-4,448.09	4,448.09	0.00	0.00	0.00
13,300.00	90.00	270.00	9,237.00	1,255.75	-4,548.09	4,548.09	0.00	0.00	0.00
13,400.00	90.00	270.00	9,237.00	1,255.75	-4,648.09	4,648.09	0.00	0.00	0.00
13,500.00	90.00	270.00	9,237.00	1,255.75	-4,748.09	4,748.09	0.00	0.00	0.00
13,600.00	90.00	270.00	9,237.00	1,255.75	-4,848.09	4,848.09	0.00	0.00	0.00
13,700.00	90.00	270.00	9,237.00	1,255.75	-4,948.09	4,948.09	0.00	0.00	0.00
13,800.00	90.00	270.00	9,237.00	1,255.75	-5,048.09	5,048.09	0.00	0.00	0.00
13,900.00	90.00	270.00	9,237.00	1,255.75	-5,148.09	5,148.09	0.00	0.00	0.00
14,000.00	90.00	270.00	9,237.00	1,255.75	-5,248.09	5,248.09	0.00	0.00	0.00
14,100.00	90.00	270.00	9,237.00	1,255.75	-5,348.09	5,348.09	0.00	0.00	0.00
14,200.00	90.00	270.00	9,237.00	1,255.75	-5,448.09	5,448.09	0.00	0.00	0.00
14,300.00	90.00	270.00	9,237.00	1,255.75	-5,548.09	5,548.09	0.00	0.00	0.00
14,400.00	90.00	270.00	9,237.00	1,255.75	-5,648.09	5,648.09	0.00	0.00	0.00
14,500.00	90.00	270.00	9,237.00	1,255.75	-5,748.09	5,748.09	0.00	0.00	0.00
14,600.00	90.00	270.00	9,237.00	1,255.75	-5,848.09	5,848.09	0.00	0.00	0.00
14,700.00	90.00	270.00	9,237.00	1,255.75	-5,948.09	5,948.09	0.00	0.00	0.00
14,800.00	90.00	270.00	9,237.00	1,255.75	-6,048.09	6,048.09	0.00	0.00	0.00
14,900.00	90.00	270.00	9,237.00	1,255.75	-6,148.09	6,148.09	0.00	0.00	0.00
14,927.52	90.00	270.00	9,237.00	1,255.75	-6,175.61	6,175.61	0.00	0.00	0.00
15,000.00	90.00	270.72	9,237.00	1,256.21	-6,248.09	6,248.09	1.00	0.00	1.00
15,100.00	90.00	271.72	9,237.00	1,258.35	-6,348.07	6,348.07	1.00	0.00	1.00
15,200.00	90.00	272.72	9,237.00	1,262.23	-6,447.99	6,447.99	1.00	0.00	1.00
15,300.00	90.00	273.72	9,237.00	1,267.85	-6,547.83	6,547.83	1.00	0.00	1.00
15,400.00	90.00	274.72	9,237.00	1,275.22	-6,647.56	6,647.56	1.00	0.00	1.00
15,427.52	90.00	275.00	9,237.00	1,277.55	-6,674.97	6,674.97	1.00	0.00	1.00
15,500.00	90.00	275.00	9,237.00	1,283.87	-6,747.18	6,747.18	0.00	0.00	0.00
15,600.00	90.00	275.00	9,237.00	1,292.59	-6,846.80	6,846.80	0.00	0.00	0.00
15,700.00	90.00	275.00	9,237.00	1,301.30	-6,946.42	6,946.42	0.00	0.00	0.00
15,800.00	90.00	275.00	9,237.00	1,310.02	-7,046.04	7,046.04	0.00	0.00	0.00
15,900.00	90.00	275.00	9,237.00	1,318.73	-7,145.66	7,145.66	0.00	0.00	0.00
16,000.00	90.00	275.00	9,237.00	1,327.45	-7,245.28	7,245.28	0.00	0.00	0.00
16,100.00	90.00	275.00	9,237.00	1,336.16	-7,344.90	7,344.90	0.00	0.00	0.00
16,200.00	90.00	275.00	9,237.00	1,344.88	-7,444.52	7,444.52	0.00	0.00	0.00
16,300.00	90.00	275.00	9,237.00	1,353.59	-7,544.14	7,544.14	0.00	0.00	0.00
16,400.00	90.00	275.00	9,237.00	1,362.31	-7,643.76	7,643.76	0.00	0.00	0.00
16,500.00	90.00	275.00	9,237.00	1,371.03	-7,743.38	7,743.38	0.00	0.00	0.00
16,600.00	90.00	275.00	9,237.00	1,379.74	-7,843.00	7,843.00	0.00	0.00	0.00
16,700.00	90.00	275.00	9,237.00	1,388.46	-7,942.61	7,942.61	0.00	0.00	0.00
16,800.00	90.00	275.00	9,237.00	1,397.17	-8,042.23	8,042.23	0.00	0.00	0.00
16,900.00	90.00	275.00	9,237.00	1,405.89	-8,141.85	8,141.85	0.00	0.00	0.00
17,000.00	90.00	275.00	9,237.00	1,414.60	-8,241.47	8,241.47	0.00	0.00	0.00
17,100.00	90.00	275.00	9,237.00	1,423.32	-8,341.09	8,341.09	0.00	0.00	0.00
17,200.00	90.00	275.00	9,237.00	1,432.03	-8,440.71	8,440.71	0.00	0.00	0.00
17,300.00	90.00	275.00	9,237.00	1,440.75	-8,540.33	8,540.33	0.00	0.00	0.00
17,400.00	90.00	275.00	9,237.00	1,449.47	-8,639.95	8,639.95	0.00	0.00	0.00
17,500.00	90.00	275.00	9,237.00	1,458.18	-8,739.57	8,739.57	0.00	0.00	0.00
17,600.00	90.00	275.00	9,237.00	1,466.90	-8,839.19	8,839.19	0.00	0.00	0.00
17,677.52	90.00	275.00	9,237.00	1,473.65	-8,916.41	8,916.41	0.00	0.00	0.00
17,700.00	90.00	274.78	9,237.00	1,475.57	-8,938.81	8,938.81	1.00	0.00	-1.00
17,800.00	90.00	273.78	9,237.00	1,483.02	-9,038.53	9,038.53	1.00	0.00	-1.00
17,900.00	90.00	272.78	9,237.00	1,488.74	-9,138.37	9,138.37	1.00	0.00	-1.00

Scientific Drilling, Intl

Planning Report

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

Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
 TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
18,000.00	90.00	271.78	9,237.00	1,492.71	-9,238.29	9,238.29	1.00	0.00	-1.00
18,100.00	90.00	270.78	9,237.00	1,494.93	-9,338.26	9,338.26	1.00	0.00	-1.00
18,177.52	90.00	270.00	9,237.00	1,495.46	-9,415.78	9,415.78	1.00	0.00	-1.00
18,200.00	90.00	270.00	9,237.00	1,495.46	-9,438.26	9,438.26	0.00	0.00	0.00
18,300.00	90.00	270.00	9,237.00	1,495.46	-9,538.26	9,538.26	0.00	0.00	0.00
18,400.00	90.00	270.00	9,237.00	1,495.46	-9,638.26	9,638.26	0.00	0.00	0.00
18,500.00	90.00	270.00	9,237.00	1,495.46	-9,738.26	9,738.26	0.00	0.00	0.00
18,600.00	90.00	270.00	9,237.00	1,495.46	-9,838.26	9,838.26	0.00	0.00	0.00
18,700.00	90.00	270.00	9,237.00	1,495.46	-9,938.26	9,938.26	0.00	0.00	0.00
18,800.00	90.00	270.00	9,237.00	1,495.46	-10,038.26	10,038.26	0.00	0.00	0.00
18,900.00	90.00	270.00	9,237.00	1,495.46	-10,138.26	10,138.26	0.00	0.00	0.00
19,000.00	90.00	270.00	9,237.00	1,495.46	-10,238.26	10,238.26	0.00	0.00	0.00
19,100.00	90.00	270.00	9,237.00	1,495.46	-10,338.26	10,338.26	0.00	0.00	0.00
19,200.00	90.00	270.00	9,237.00	1,495.46	-10,438.26	10,438.26	0.00	0.00	0.00
19,300.00	90.00	270.00	9,237.00	1,495.46	-10,538.26	10,538.26	0.00	0.00	0.00
19,381.84	90.00	270.00	9,237.00	1,495.46	-10,620.10	10,620.10	0.00	0.00	0.00
Collie 32-401H LTP									
19,400.00	90.00	270.00	9,237.00	1,495.46	-10,638.26	10,638.26	0.00	0.00	0.00
19,481.94	90.00	270.00	9,237.00	1,495.46	-10,720.20	10,720.20	0.00	0.00	0.00
Collie 32-401H BHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Collie 32-401H FTP	0.00	0.00	9,157.00	1,258.60	-732.50	491,660.70	597,049.40	32.351517	-104.152919
- hit/miss target									
- Shape									
- plan misses target center by 2.90usft at 9470.16usft MD (9156.52 TVD, 1255.75 N, -732.78 E)									
- Point									
Collie 32-401H BHL	0.00	0.00	9,237.00	1,220.80	-10,720.20	491,622.90	587,061.70	32.351455	-104.185263
- plan misses target center by 274.66usft at 19481.94usft MD (9237.00 TVD, 1495.46 N, -10720.20 E)									
- Point									
Collie 32-401H LTP	0.00	0.00	9,237.00	1,221.20	-10,620.10	491,623.30	587,161.80	32.351456	-104.184939
- plan misses target center by 274.26usft at 19381.84usft MD (9237.00 TVD, 1495.46 N, -10620.10 E)									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)
9,020.97	8,806.00	3rd Bone Spring Lime			
9,380.71	9,105.00	3rd Bone Spring Sand			
9,425.12	9,132.00	Wolfcamp Top			
9,594.45	9,208.00	WC_X			
9,629.56	9,218.00	WC_Y			
9,670.32	9,227.00	Top Target			
9,709.79	9,233.00	Landing Point			

Scientific Drilling, Intl

Planning Report

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

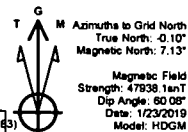
Local Co-ordinate Reference: Well Collie 35-34-22-27 Fee 401H
TVD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
MD Reference: GL 3079 + KB 26 = @ 3105.00usft (HP 265)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		
		+N/-S (usft)	+E/-W (usft)	Comment
8,877.52	8,664.04	1,255.75	-452.65	KOP

Collie 35-34-22-27 Fee 401H
Eddy County, New Mexico (NAD 83)
Northing: 490402.10
Easting: 597781.90
Plan #2 ST01

GL 3079 + KB 26 = @ 3105 00usft (HP 265)



WELL DETAILS Collie 35-34-22-27 Fee 401H					
Ground Level: 3079.00					
+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.00	0.00	490402.10	597781.90	32 348054	-104.150554

SITE DETAILS: Collie 35-34-22-27 Fee 401H
 Site Centre Northing: 490402.10
 Easting: 597781.90
 Positional Uncertainty: 0.00
 Convergence: 0.10
 Local North: Grid

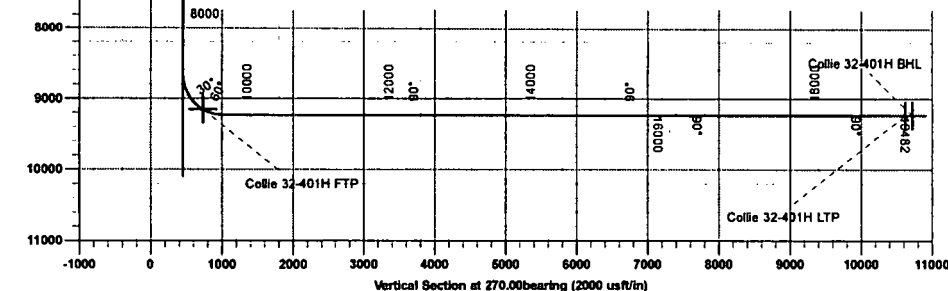
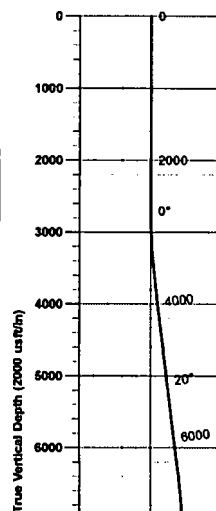
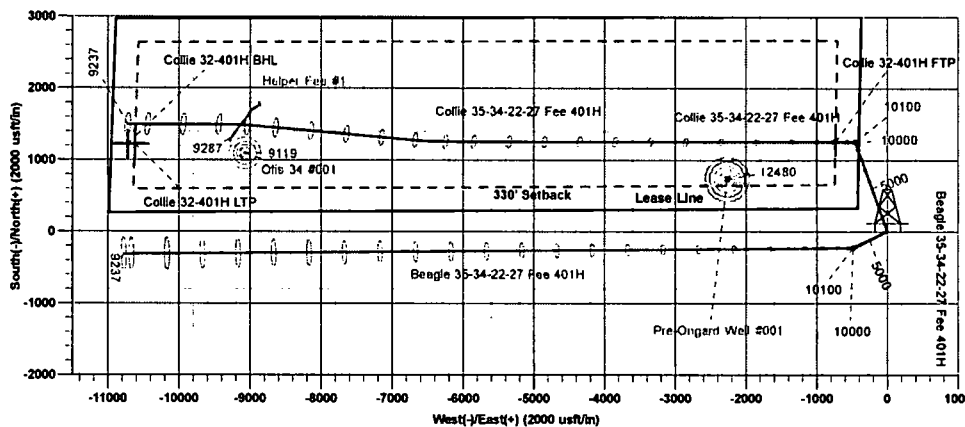
PROJECT DETAILS: Eddy County, New Mexico (NAD 83)
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level

SECTION DETAILS									
MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSecl	
8600.00	0.00	0.00	8386.52	1255.75	-452.85	0.00	0.00	452.85	
8677.52	0.00	0.00	8684.04	1255.75	-452.85	0.00	0.00	452.85	
8777.52	90.00	270.00	9237.00	1255.75	-1025.81	10.00	270.00	1025.81	
14927.52	90.00	270.00	9237.00	1255.75	-6175.61	0.00	0.00	6175.61	
15427.52	90.00	275.00	9237.00	1277.55	-6874.97	1.00	90.00	6874.97	
17677.52	90.00	275.00	9237.00	1473.85	-8918.41	0.00	0.00	8918.41	
18177.52	90.00	270.00	9237.00	1495.48	-9415.78	1.00	-90.00	9415.78	
19481.84	90.00	270.00	9237.00	1495.48	-10720.20	0.00	0.00	10720.20	

DESIGN TARGET DETAILS			
Name	TVD	+N-S	+E-W
Collie 32-401H FTP	9157.00	1258.80	-732.50
Collie 32-401H BHL	9237.00	1220.80	-10720.20
Collie 32-401H LTP	9237.00	1221.20	-10620.10

To convert a Magnetic Direction to a Grid Direction, Add 7.14°
 To convert a True Direction to a Grid Direction, Subtract 0.10°

CASING DETAILS		
TVD	MD	Size



FORMATION TOP DETAILS	
TVDPath	Formation
8606.00	3rd Bone Spring Lime
9105.00	3rd Bone Spring Sand
9132.00	Wolfcamp Top
9208.00	WC-X
9218.00	WC-Y
9227.00	Top Target
9233.00	Landing Point

15:13, January 26, 2019
 Scientific Drilling
 325 S Pauline Rd
 Odessa, TX 79765