

Project: Lea County, NM
Site: Angus State 24-35 16 456H
Well: 456H
Wellbore: Lateral
Design: Plan #1
Rig: Cactus 139
Job: M18115



SECTION DETAILS

MD	Inc	Azi	TVD	-N-S	-E-W	Dlog	Tface	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6349.49	0.00	0.00	6349.49	0.00	0.00	0.00	0.00	0.00
6749.49	0.00	351.80	6748.76	20.71	-2.98	1.50	351.80	-20.74
11234.94	0.00	351.80	11209.69	448.78	-18.69	0.00	351.80	-485.42
12434.31	90.00	179.46	12400.00	-227.43	-74.24	0.00	172.30	226.95
16650.10	90.00	179.46	12000.00	-444.23	-34.62	0.00	0.00	4442.71

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Angus State 24-35 16 456H FTP	0.00	8.96	-76.37	446300.11	799400.57	32° 13' 23.84 N	103° 21' 54.63 W
Angus State 24-35 16 456H SL	0.00	0.00	0.00	446291.15	799476.94	32° 13' 23.74 N	103° 21' 53.74 W
Angus State 24-35 16 456H LP	12000.00	-227.64	-74.24	446063.51	799402.70	32° 13' 21.50 N	103° 21' 54.63 W
Angus State 24-35 16 456H PBHL	12000.00	-4443.23	-34.62	441847.92	799442.32	32° 12' 39.78 N	103° 21' 54.61 W

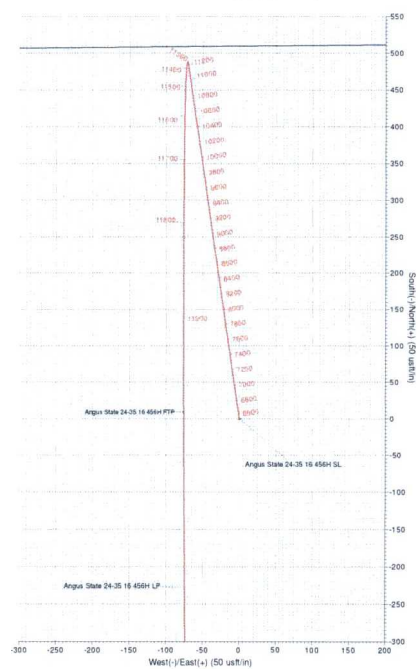
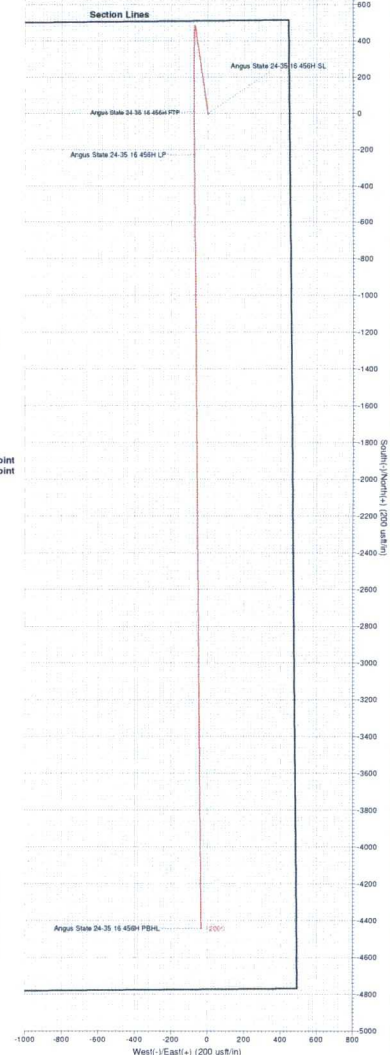
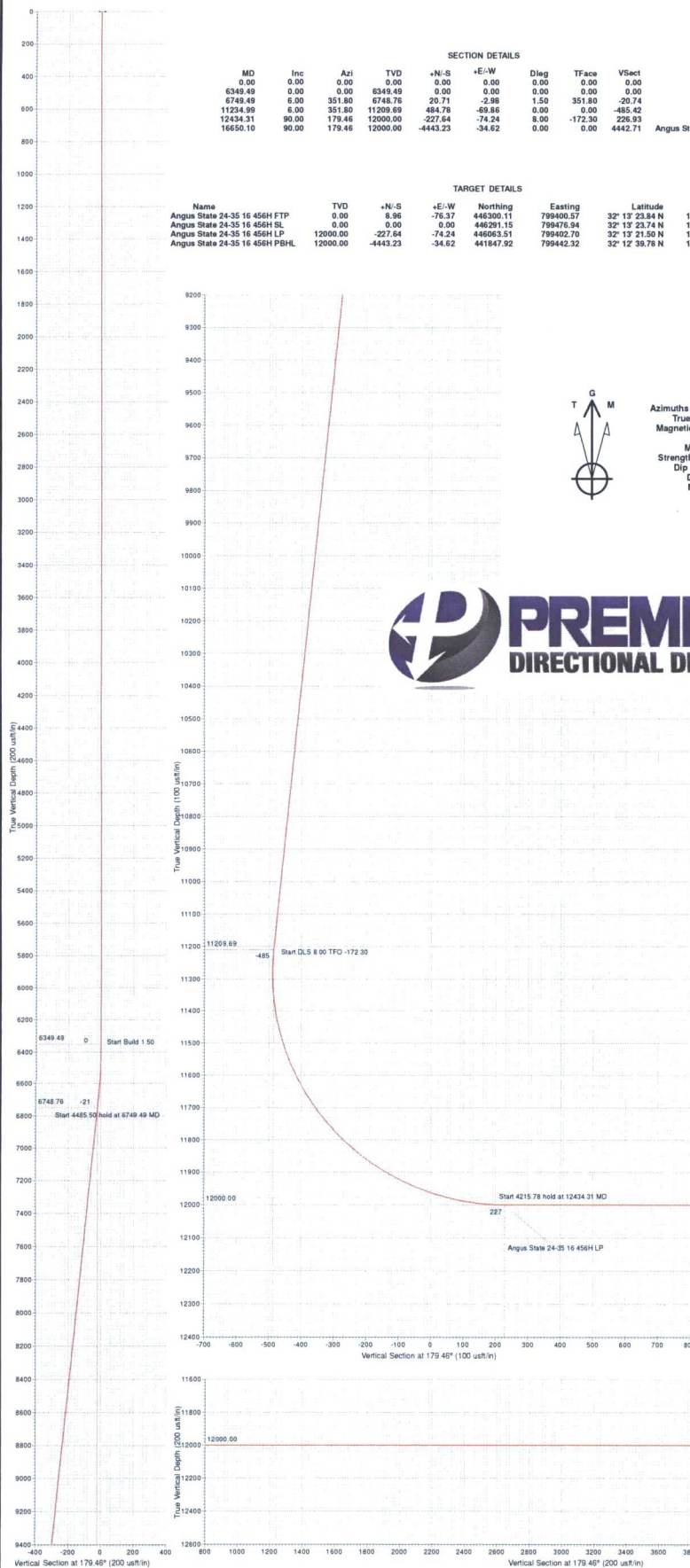


Azimuths to Grid North
 True North: -0.52°
 Magnetic North: 6.28°
 Magnetic Field
 Strength: 48010.8nT
 Dip Angle: 59.92°
 Date: 3/5/2018
 Model: HDGM



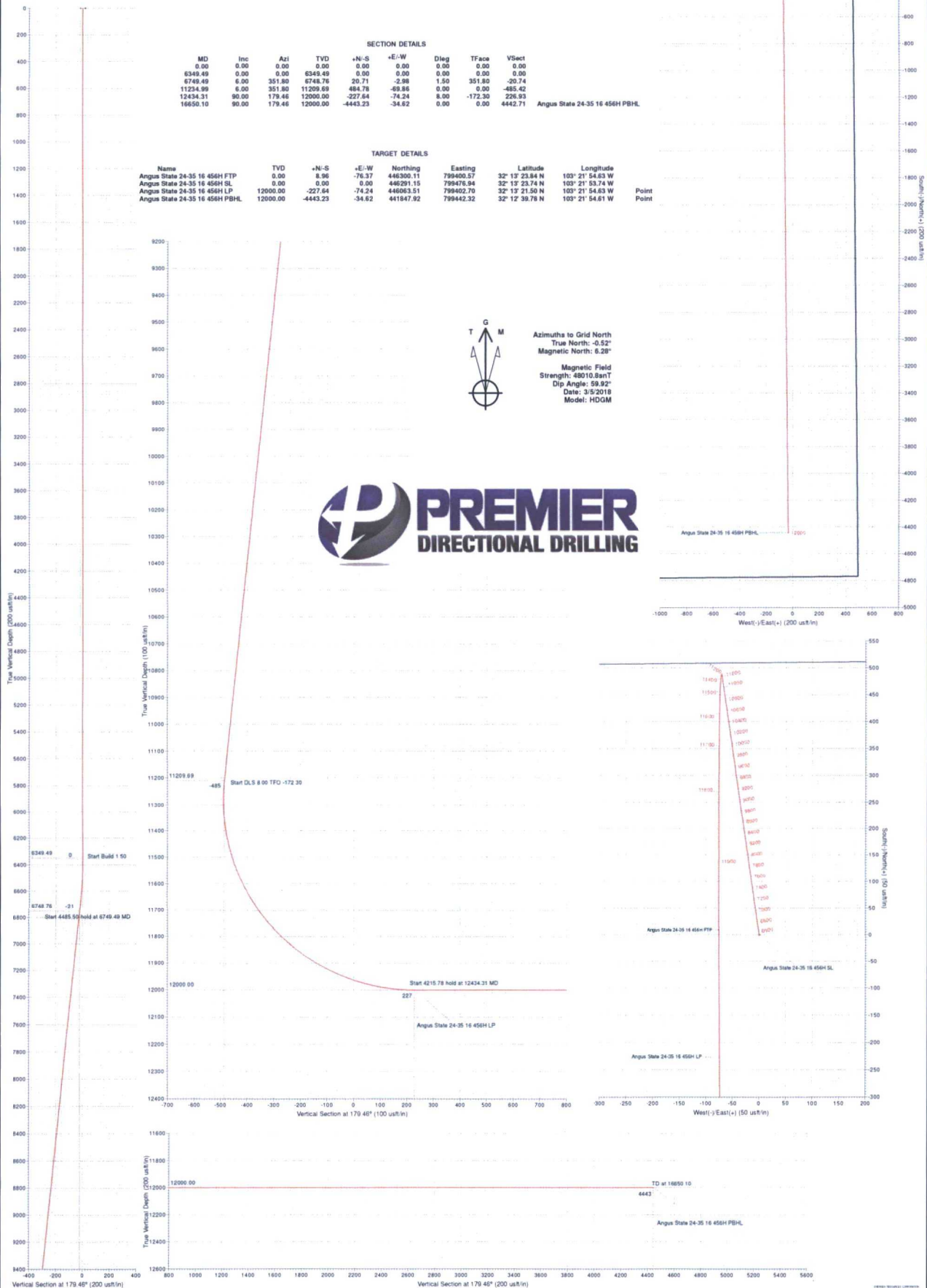
PREMIER

DIRECTIONAL DRILLING



ENERGEN RESOURCES CORPORATION

Project: Lea County, NM
Site: Angus State 24-35 16 456H
Well: 456H
Wellbore: Lateral
Design: Plan #1
Rig: Cactus 139
Job: M16115



Planning Report

Database:	EDM 5000.14 Multi User	Local Co-ordinate Reference:	Well 456H
Company:	ENERGEN RESOURCES CORPORATION	TVD Reference:	3366 @ 3391.00usft (Cactus139)
Project:	Lea County, NM	MD Reference:	3366 @ 3391.00usft (Cactus139)
Site:	Angus State 24-35 16 456H	North Reference:	Grid
Well:	456H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project	Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Angus State 24-35 16 456H			
Site Position:		Northing:	446,291.15 usft	Latitude:	32° 13' 23.74 N
From:	Map	Easting:	799,476.94 usft	Longitude:	103° 21' 53.74 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.52 °

Well	456H					
Well Position	+N/-S	0.00 usft	Northing:	446,291.15 usft	Latitude:	32° 13' 23.74 N
	+E/-W	0.00 usft	Easting:	799,476.94 usft	Longitude:	103° 21' 53.74 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,366.00 usft

Wellbore	Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/5/2018	6.80	59.92	48,011

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 (°)
	0.00	0.00	0.00	179.46

Plan Survey Tool Program	Date	3/5/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	16,650.10	Plan #1 (Lateral)	MWD+HRGM	
				OWSG MWD + HRGM	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,349.49	0.00	0.00	6,349.49	0.00	0.00	0.00	0.00	0.00	0.00	
6,749.49	6.00	351.80	6,748.76	20.71	-2.98	1.50	1.50	0.00	351.80	
11,234.99	6.00	351.80	11,209.69	484.78	-69.86	0.00	0.00	0.00	0.00	
12,434.31	90.00	179.46	12,000.00	-227.64	-74.24	8.00	7.00	-14.37	-172.30	
16,650.10	90.00	179.46	12,000.00	-4,443.23	-34.62	0.00	0.00	0.00	0.00	Angus State 24-35 16

Planning Report

Database:	EDM 5000.14 Multi User	Local Co-ordinate Reference:	Well 456H
Company:	ENERGEN RESOURCES CORPORATION	TVD Reference:	3366 @ 3391.00usft (Cactus139)
Project:	Lea County, NM	MD Reference:	3366 @ 3391.00usft (Cactus139)
Site:	Angus State 24-35 16 456H	North Reference:	Grid
Well:	456H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Planning Report

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Company:	ENERGEN RESOURCES CORPORATION	TVD Reference:	3366 @ 3391.00usft (Cactus139)
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Site:	Angus State 24-35 16 456H	North Reference:	Grid
Well:	456H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,349.49	0.00	0.00	6,349.49	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.76	351.80	6,400.00	0.33	-0.05	-0.33	1.50	1.50	0.00
6,500.00	2.26	351.80	6,499.96	2.93	-0.42	-2.94	1.50	1.50	0.00
6,600.00	3.76	351.80	6,599.82	8.13	-1.17	-8.14	1.50	1.50	0.00
6,700.00	5.26	351.80	6,699.51	15.91	-2.29	-15.93	1.50	1.50	0.00
6,749.49	6.00	351.80	6,748.76	20.71	-2.98	-20.74	1.50	1.50	0.00
6,800.00	6.00	351.80	6,798.99	25.94	-3.74	-25.97	0.00	0.00	0.00
6,900.00	6.00	351.80	6,898.44	36.28	-5.23	-36.33	0.00	0.00	0.00
7,000.00	6.00	351.80	6,997.90	46.63	-6.72	-46.69	0.00	0.00	0.00
7,100.00	6.00	351.80	7,097.35	56.97	-8.21	-57.05	0.00	0.00	0.00
7,200.00	6.00	351.80	7,196.80	67.32	-9.70	-67.41	0.00	0.00	0.00
7,300.00	6.00	351.80	7,296.25	77.67	-11.19	-77.77	0.00	0.00	0.00
7,400.00	6.00	351.80	7,395.71	88.01	-12.68	-88.13	0.00	0.00	0.00
7,500.00	6.00	351.80	7,495.16	98.36	-14.17	-98.49	0.00	0.00	0.00
7,600.00	6.00	351.80	7,594.61	108.70	-15.66	-108.85	0.00	0.00	0.00
7,700.00	6.00	351.80	7,694.06	119.05	-17.16	-119.21	0.00	0.00	0.00
7,800.00	6.00	351.80	7,793.51	129.40	-18.65	-129.57	0.00	0.00	0.00
7,900.00	6.00	351.80	7,892.97	139.74	-20.14	-139.93	0.00	0.00	0.00
8,000.00	6.00	351.80	7,992.42	150.09	-21.63	-150.29	0.00	0.00	0.00
8,100.00	6.00	351.80	8,091.87	160.43	-23.12	-160.65	0.00	0.00	0.00
8,200.00	6.00	351.80	8,191.32	170.78	-24.61	-171.00	0.00	0.00	0.00
8,300.00	6.00	351.80	8,290.78	181.13	-26.10	-181.36	0.00	0.00	0.00
8,400.00	6.00	351.80	8,390.23	191.47	-27.59	-191.72	0.00	0.00	0.00
8,500.00	6.00	351.80	8,489.68	201.82	-29.08	-202.08	0.00	0.00	0.00
8,600.00	6.00	351.80	8,589.13	212.16	-30.57	-212.44	0.00	0.00	0.00
8,700.00	6.00	351.80	8,688.58	222.51	-32.06	-222.80	0.00	0.00	0.00
8,800.00	6.00	351.80	8,788.04	232.86	-33.56	-233.16	0.00	0.00	0.00
8,900.00	6.00	351.80	8,887.49	243.20	-35.05	-243.52	0.00	0.00	0.00
9,000.00	6.00	351.80	8,986.94	253.55	-36.54	-253.88	0.00	0.00	0.00
9,100.00	6.00	351.80	9,086.39	263.89	-38.03	-264.24	0.00	0.00	0.00
9,200.00	6.00	351.80	9,185.85	274.24	-39.52	-274.60	0.00	0.00	0.00
9,300.00	6.00	351.80	9,285.30	284.59	-41.01	-284.96	0.00	0.00	0.00
9,400.00	6.00	351.80	9,384.75	294.93	-42.50	-295.32	0.00	0.00	0.00
9,500.00	6.00	351.80	9,484.20	305.28	-43.99	-305.68	0.00	0.00	0.00
9,600.00	6.00	351.80	9,583.65	315.62	-45.48	-316.04	0.00	0.00	0.00
9,700.00	6.00	351.80	9,683.11	325.97	-46.97	-326.40	0.00	0.00	0.00
9,800.00	6.00	351.80	9,782.56	336.32	-48.46	-336.76	0.00	0.00	0.00
9,900.00	6.00	351.80	9,882.01	346.66	-49.95	-347.12	0.00	0.00	0.00
10,000.00	6.00	351.80	9,981.46	357.01	-51.45	-357.48	0.00	0.00	0.00
10,100.00	6.00	351.80	10,080.92	367.35	-52.94	-367.84	0.00	0.00	0.00
10,200.00	6.00	351.80	10,180.37	377.70	-54.43	-378.20	0.00	0.00	0.00
10,300.00	6.00	351.80	10,279.82	388.05	-55.92	-388.56	0.00	0.00	0.00
10,400.00	6.00	351.80	10,379.27	398.39	-57.41	-398.92	0.00	0.00	0.00
10,500.00	6.00	351.80	10,478.72	408.74	-58.90	-409.27	0.00	0.00	0.00

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Site:	Angus State 24-35 16 456H	North Reference:	Grid
Well:	456H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,600.00	6.00	351.80	10,578.18	419.08	-60.39	-419.63	0.00	0.00	0.00
10,700.00	6.00	351.80	10,677.63	429.43	-61.88	-429.99	0.00	0.00	0.00
10,800.00	6.00	351.80	10,777.08	439.78	-63.37	-440.35	0.00	0.00	0.00
10,900.00	6.00	351.80	10,876.53	450.12	-64.86	-450.71	0.00	0.00	0.00
11,000.00	6.00	351.80	10,975.98	460.47	-66.35	-461.07	0.00	0.00	0.00
11,100.00	6.00	351.80	11,075.44	470.81	-67.85	-471.43	0.00	0.00	0.00
11,200.00	6.00	351.80	11,174.89	481.16	-69.34	-481.79	0.00	0.00	0.00
11,234.99	6.00	351.80	11,209.69	484.78	-69.86	-485.42	0.00	0.00	0.00
11,250.00	4.81	349.88	11,224.63	486.18	-70.08	-486.82	8.00	-7.91	-12.78
11,300.00	1.10	312.34	11,274.56	488.56	-70.80	-489.21	8.00	-7.43	-75.08
11,350.00	3.35	193.30	11,324.53	487.46	-71.49	-488.11	8.00	4.51	-238.07
11,400.00	7.30	185.74	11,374.31	482.88	-72.15	-483.54	8.00	7.89	-15.12
11,450.00	11.28	183.49	11,423.64	474.83	-72.76	-475.50	8.00	7.97	-4.51
11,500.00	15.28	182.40	11,472.29	463.37	-73.34	-464.04	8.00	7.98	-2.17
11,550.00	19.27	181.76	11,520.03	448.53	-73.87	-449.21	8.00	7.99	-1.29
11,600.00	23.27	181.33	11,566.61	430.40	-74.35	-431.09	8.00	7.99	-0.86
11,650.00	27.27	181.02	11,611.82	409.07	-74.78	-409.76	8.00	8.00	-0.62
11,700.00	31.26	180.78	11,655.43	384.64	-75.16	-385.33	8.00	8.00	-0.47
11,750.00	35.26	180.60	11,697.23	357.22	-75.49	-357.92	8.00	8.00	-0.37
11,800.00	39.26	180.44	11,737.02	326.95	-75.76	-327.65	8.00	8.00	-0.31
11,850.00	43.26	180.31	11,774.59	293.99	-75.98	-294.69	8.00	8.00	-0.26
11,900.00	47.26	180.20	11,809.78	258.48	-76.14	-259.19	8.00	8.00	-0.22
11,950.00	51.26	180.11	11,842.41	220.60	-76.24	-221.31	8.00	8.00	-0.20
12,000.00	55.26	180.02	11,872.31	180.54	-76.28	-181.26	8.00	8.00	-0.17
12,050.00	59.26	179.94	11,899.35	138.50	-76.27	-139.21	8.00	8.00	-0.16
12,100.00	63.26	179.87	11,923.39	94.67	-76.19	-95.38	8.00	8.00	-0.15
12,150.00	67.26	179.80	11,944.31	49.27	-76.06	-49.98	8.00	8.00	-0.14
12,200.00	71.26	179.73	11,962.01	2.52	-75.87	-3.23	8.00	8.00	-0.13
12,250.00	75.26	179.67	11,976.42	-45.35	-75.62	44.64	8.00	8.00	-0.12
12,300.00	79.26	179.61	11,987.44	-94.11	-75.32	93.40	8.00	8.00	-0.12
12,350.00	83.26	179.56	11,995.04	-143.52	-74.96	142.81	8.00	8.00	-0.11
12,400.00	87.26	179.50	11,999.18	-193.33	-74.55	192.62	8.00	8.00	-0.11
12,434.31	90.00	179.46	12,000.00	-227.64	-74.24	226.93	8.00	8.00	-0.11
12,500.00	90.00	179.46	12,000.00	-293.32	-73.62	292.61	0.00	0.00	0.00
12,600.00	90.00	179.46	12,000.00	-393.31	-72.68	392.61	0.00	0.00	0.00
12,700.00	90.00	179.46	12,000.00	-493.31	-71.74	492.61	0.00	0.00	0.00
12,800.00	90.00	179.46	12,000.00	-593.30	-70.80	592.61	0.00	0.00	0.00
12,900.00	90.00	179.46	12,000.00	-693.30	-69.86	692.61	0.00	0.00	0.00
13,000.00	90.00	179.46	12,000.00	-793.30	-68.92	792.61	0.00	0.00	0.00
13,100.00	90.00	179.46	12,000.00	-893.29	-67.98	892.61	0.00	0.00	0.00
13,200.00	90.00	179.46	12,000.00	-993.29	-67.04	992.61	0.00	0.00	0.00
13,300.00	90.00	179.46	12,000.00	-1,093.28	-66.10	1,092.61	0.00	0.00	0.00
13,400.00	90.00	179.46	12,000.00	-1,193.28	-65.16	1,192.61	0.00	0.00	0.00
13,500.00	90.00	179.46	12,000.00	-1,293.27	-64.22	1,292.61	0.00	0.00	0.00
13,600.00	90.00	179.46	12,000.00	-1,393.27	-63.28	1,392.61	0.00	0.00	0.00
13,700.00	90.00	179.46	12,000.00	-1,493.26	-62.34	1,492.61	0.00	0.00	0.00
13,800.00	90.00	179.46	12,000.00	-1,593.26	-61.40	1,592.61	0.00	0.00	0.00
13,900.00	90.00	179.46	12,000.00	-1,693.26	-60.46	1,692.61	0.00	0.00	0.00
14,000.00	90.00	179.46	12,000.00	-1,793.25	-59.52	1,792.61	0.00	0.00	0.00
14,100.00	90.00	179.46	12,000.00	-1,893.25	-58.58	1,892.61	0.00	0.00	0.00
14,200.00	90.00	179.46	12,000.00	-1,993.24	-57.64	1,992.61	0.00	0.00	0.00
14,300.00	90.00	179.46	12,000.00	-2,093.24	-56.70	2,092.61	0.00	0.00	0.00
14,400.00	90.00	179.46	12,000.00	-2,193.23	-55.77	2,192.61	0.00	0.00	0.00
14,500.00	90.00	179.46	12,000.00	-2,293.23	-54.83	2,292.61	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Multi User	Local Co-ordinate Reference:	Well 456H
Company:	ENERGEN RESOURCES CORPORATION	TVD Reference:	3366 @ 3391.00usft (Cactus139)
Project:	Lea County, NM	MD Reference:	3366 @ 3391.00usft (Cactus139)
Site:	Angus State 24-35 16 456H	North Reference:	Grid
Well:	456H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,600.00	90.00	179.46	12,000.00	-2,393.22	-53.89	2,392.61	0.00	0.00	0.00
14,700.00	90.00	179.46	12,000.00	-2,493.22	-52.95	2,492.61	0.00	0.00	0.00
14,800.00	90.00	179.46	12,000.00	-2,593.22	-52.01	2,592.61	0.00	0.00	0.00
14,900.00	90.00	179.46	12,000.00	-2,693.21	-51.07	2,692.61	0.00	0.00	0.00
15,000.00	90.00	179.46	12,000.00	-2,793.21	-50.13	2,792.61	0.00	0.00	0.00
15,100.00	90.00	179.46	12,000.00	-2,893.20	-49.19	2,892.61	0.00	0.00	0.00
15,200.00	90.00	179.46	12,000.00	-2,993.20	-48.25	2,992.61	0.00	0.00	0.00
15,300.00	90.00	179.46	12,000.00	-3,093.19	-47.31	3,092.61	0.00	0.00	0.00
15,400.00	90.00	179.46	12,000.00	-3,193.19	-46.37	3,192.61	0.00	0.00	0.00
15,500.00	90.00	179.46	12,000.00	-3,293.19	-45.43	3,292.61	0.00	0.00	0.00
15,600.00	90.00	179.46	12,000.00	-3,393.18	-44.49	3,392.61	0.00	0.00	0.00
15,700.00	90.00	179.46	12,000.00	-3,493.18	-43.55	3,492.61	0.00	0.00	0.00
15,800.00	90.00	179.46	12,000.00	-3,593.17	-42.61	3,592.61	0.00	0.00	0.00
15,900.00	90.00	179.46	12,000.00	-3,693.17	-41.67	3,692.61	0.00	0.00	0.00
16,000.00	90.00	179.46	12,000.00	-3,793.16	-40.73	3,792.61	0.00	0.00	0.00
16,100.00	90.00	179.46	12,000.00	-3,893.16	-39.79	3,892.61	0.00	0.00	0.00
16,200.00	90.00	179.46	12,000.00	-3,993.15	-38.85	3,992.61	0.00	0.00	0.00
16,300.00	90.00	179.46	12,000.00	-4,093.15	-37.91	4,092.61	0.00	0.00	0.00
16,400.00	90.00	179.46	12,000.00	-4,193.15	-36.97	4,192.61	0.00	0.00	0.00
16,500.00	90.00	179.46	12,000.00	-4,293.14	-36.03	4,292.61	0.00	0.00	0.00
16,600.00	90.00	179.46	12,000.00	-4,393.14	-35.09	4,392.61	0.00	0.00	0.00
16,650.10	90.00	179.46	12,000.00	-4,443.23	-34.62	4,442.71	0.00	0.00	0.00