

Premier Directional Drilling

Planning Report

30-025-45031

Database:	EDM 5000 14 Multi User	Local Co-ordinate Reference:	Well 453H
Company:	ENERGEN RESOURCES CORPORATION	TVD Reference:	3331+25 @ 3356.00usft
Project:	Lea County, NM	MD Reference:	3331+25 @ 3356.00usft
Site:	Brahman State Corn 15-10 453H	North Reference:	Grid
Well:	453H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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	Brahman State Corn 15-10 453H		
Site Position:		Northing:	442,050.14 usft
From:	Map	Easting:	802,275.24 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	32° 12' 41.53 N
		Longitude:	103° 21' 21.62 W
		Grid Convergence:	0.52 °

Well	453H		
Well Position	+N/-S	0.00 usft	Northing: 442,050.14 usft
	+E/-W	0.00 usft	Easting: 802,275.24 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	Latitude: 32° 12' 41.53 N
			Longitude: 103° 21' 21.62 W
			Ground Level: 3,331.00 usft

Wellbore	Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	06/26/18	6.77	59.88	47,963

Design	Plan #2			
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	359.46

Plan Survey Tool Program	Date	07/23/18		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,185.92	Plan #2 (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	
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,766.69	7.00	179.43	5,765.53	-28.47	0.28	1.50	1.50	0.00	179.43	
8,647.10	7.00	179.43	8,624.47	-379.51	3.78	0.00	0.00	0.00	0.00	
9,113.79	0.00	0.00	9,090.00	-407.98	4.07	1.50	-1.50	0.00	180.00	
11,496.83	0.00	0.00	11,473.04	-407.98	4.07	0.00	0.00	0.00	0.00	
12,396.83	90.00	359.46	12,046.00	164.95	-1.31	10.00	10.00	-0.06	359.46	
22,185.96	90.00	359.46	12,046.00	9,953.65	-93.11	0.00	0.00	0.00	0.00	Brahman State Corn

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Well:	453H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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

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Site:	Brahman State Com 15-10 453H	North Reference:	Grid
Well:	453H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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	1.50	179.43	5,399.99	-1.31	0.01	-1.31	1.50	1.50	0.00
5,500.00	3.00	179.43	5,499.91	-5.23	0.05	-5.23	1.50	1.50	0.00
5,600.00	4.50	179.43	5,599.69	-11.77	0.12	-11.77	1.50	1.50	0.00
5,700.00	6.00	179.43	5,699.27	-20.92	0.21	-20.92	1.50	1.50	0.00
5,766.69	7.00	179.43	5,765.53	-28.47	0.28	-28.47	1.50	1.50	0.00
5,800.00	7.00	179.43	5,798.59	-32.53	0.32	-32.53	0.00	0.00	0.00
5,900.00	7.00	179.43	5,897.85	-44.72	0.45	-44.72	0.00	0.00	0.00
6,000.00	7.00	179.43	5,997.10	-56.91	0.57	-56.91	0.00	0.00	0.00
6,100.00	7.00	179.43	6,096.36	-69.09	0.69	-69.10	0.00	0.00	0.00
6,200.00	7.00	179.43	6,195.61	-81.28	0.81	-81.28	0.00	0.00	0.00
6,300.00	7.00	179.43	6,294.86	-93.47	0.93	-93.47	0.00	0.00	0.00
6,400.00	7.00	179.43	6,394.12	-105.65	1.05	-105.66	0.00	0.00	0.00
6,500.00	7.00	179.43	6,493.37	-117.84	1.17	-117.85	0.00	0.00	0.00
6,600.00	7.00	179.43	6,592.63	-130.03	1.30	-130.03	0.00	0.00	0.00
6,700.00	7.00	179.43	6,691.88	-142.21	1.42	-142.22	0.00	0.00	0.00
6,800.00	7.00	179.43	6,791.14	-154.40	1.54	-154.41	0.00	0.00	0.00
6,900.00	7.00	179.43	6,890.39	-166.59	1.66	-166.60	0.00	0.00	0.00
7,000.00	7.00	179.43	6,989.65	-178.78	1.78	-178.78	0.00	0.00	0.00
7,100.00	7.00	179.43	7,088.90	-190.96	1.90	-190.97	0.00	0.00	0.00
7,200.00	7.00	179.43	7,188.16	-203.15	2.02	-203.16	0.00	0.00	0.00
7,300.00	7.00	179.43	7,287.41	-215.34	2.15	-215.35	0.00	0.00	0.00
7,400.00	7.00	179.43	7,386.66	-227.52	2.27	-227.53	0.00	0.00	0.00
7,500.00	7.00	179.43	7,485.92	-239.71	2.39	-239.72	0.00	0.00	0.00
7,600.00	7.00	179.43	7,585.17	-251.90	2.51	-251.91	0.00	0.00	0.00
7,700.00	7.00	179.43	7,684.43	-264.08	2.63	-264.10	0.00	0.00	0.00
7,800.00	7.00	179.43	7,783.68	-276.27	2.75	-276.28	0.00	0.00	0.00
7,900.00	7.00	179.43	7,882.94	-288.46	2.87	-288.47	0.00	0.00	0.00
8,000.00	7.00	179.43	7,982.19	-300.64	3.00	-300.66	0.00	0.00	0.00
8,100.00	7.00	179.43	8,081.45	-312.83	3.12	-312.85	0.00	0.00	0.00
8,200.00	7.00	179.43	8,180.70	-325.02	3.24	-325.03	0.00	0.00	0.00
8,300.00	7.00	179.43	8,279.96	-337.21	3.36	-337.22	0.00	0.00	0.00
8,400.00	7.00	179.43	8,379.21	-349.39	3.48	-349.41	0.00	0.00	0.00
8,500.00	7.00	179.43	8,478.46	-361.58	3.60	-361.60	0.00	0.00	0.00
8,600.00	7.00	179.43	8,577.72	-373.77	3.72	-373.78	0.00	0.00	0.00
8,647.10	7.00	179.43	8,624.47	-379.51	3.78	-379.53	0.00	0.00	0.00
8,700.00	6.21	179.43	8,677.02	-385.59	3.84	-385.61	1.50	-1.50	0.00
8,800.00	4.71	179.43	8,776.56	-395.10	3.94	-395.12	1.50	-1.50	0.00
8,900.00	3.21	179.43	8,876.32	-402.00	4.01	-402.02	1.50	-1.50	0.00
9,000.00	1.71	179.43	8,976.22	-406.29	4.05	-406.31	1.50	-1.50	0.00
9,100.00	0.21	179.43	9,076.21	-407.96	4.07	-407.98	1.50	-1.50	0.00
9,113.79	0.00	0.00	9,090.00	-407.98	4.07	-408.00	1.50	-1.50	0.00
9,200.00	0.00	0.00	9,176.21	-407.98	4.07	-408.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,276.21	-407.98	4.07	-408.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,376.21	-407.98	4.07	-408.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,476.21	-407.98	4.07	-408.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,576.21	-407.98	4.07	-408.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,676.21	-407.98	4.07	-408.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,776.21	-407.98	4.07	-408.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,876.21	-407.98	4.07	-408.00	0.00	0.00	0.00
10,000.00	0.00	0.00	9,976.21	-407.98	4.07	-408.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,076.21	-407.98	4.07	-408.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,176.21	-407.98	4.07	-408.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,276.21	-407.98	4.07	-408.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,376.21	-407.98	4.07	-408.00	0.00	0.00	0.00

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Well:	453H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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)	
10,500.00	0.00	0.00	10,476.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,576.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,676.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
10,800.00	0.00	0.00	10,776.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,876.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
11,000.00	0.00	0.00	10,976.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
11,100.00	0.00	0.00	11,076.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
11,200.00	0.00	0.00	11,176.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
11,300.00	0.00	0.00	11,276.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
11,400.00	0.00	0.00	11,376.21	-407.98	4.07	-408.00	0.00	0.00	0.00	
11,496.83	0.00	0.00	11,473.04	-407.98	4.07	-408.00	0.00	0.00	0.00	
11,500.00	0.32	359.46	11,476.21	-407.97	4.07	-407.99	10.00	10.00	0.00	
11,550.00	5.32	359.46	11,526.13	-405.51	4.04	-405.54	10.00	10.00	0.00	
11,600.00	10.32	359.46	11,575.65	-398.72	3.98	-398.74	10.00	10.00	0.00	
11,650.00	15.32	359.46	11,624.39	-387.63	3.87	-387.65	10.00	10.00	0.00	
11,700.00	20.32	359.46	11,671.98	-372.34	3.73	-372.35	10.00	10.00	0.00	
11,750.00	25.32	359.46	11,718.05	-352.95	3.55	-352.97	10.00	10.00	0.00	
11,800.00	30.32	359.46	11,762.26	-329.63	3.33	-329.65	10.00	10.00	0.00	
11,850.00	35.32	359.46	11,804.26	-302.54	3.08	-302.56	10.00	10.00	0.00	
11,900.00	40.32	359.46	11,843.75	-271.90	2.79	-271.91	10.00	10.00	0.00	
11,950.00	45.32	359.46	11,880.42	-237.93	2.47	-237.94	10.00	10.00	0.00	
12,000.00	50.32	359.46	11,913.98	-200.89	2.12	-200.90	10.00	10.00	0.00	
12,050.00	55.32	359.46	11,944.19	-161.07	1.75	-161.08	10.00	10.00	0.00	
12,100.00	60.32	359.46	11,970.81	-118.77	1.35	-118.77	10.00	10.00	0.00	
12,150.00	65.32	359.46	11,993.65	-74.30	0.94	-74.31	10.00	10.00	0.00	
12,200.00	70.32	359.46	12,012.52	-28.02	0.50	-28.03	10.00	10.00	0.00	
12,250.00	75.32	359.46	12,027.29	19.73	0.05	19.73	10.00	10.00	0.00	
12,300.00	80.32	359.46	12,037.83	68.59	-0.40	68.59	10.00	10.00	0.00	
12,350.00	85.32	359.46	12,044.08	118.17	-0.87	118.18	10.00	10.00	0.00	
12,396.83	90.00	359.46	12,046.00	164.95	-1.31	164.96	10.00	10.00	0.00	
12,400.00	90.00	359.46	12,046.00	168.12	-1.34	168.13	0.00	0.00	0.00	
12,500.00	90.00	359.46	12,046.00	268.12	-2.27	268.13	0.00	0.00	0.00	
12,600.00	90.00	359.46	12,046.00	368.11	-3.21	368.13	0.00	0.00	0.00	
12,700.00	90.00	359.46	12,046.00	468.11	-4.15	468.13	0.00	0.00	0.00	
12,800.00	90.00	359.46	12,046.00	568.10	-5.09	568.13	0.00	0.00	0.00	
12,900.00	90.00	359.46	12,046.00	668.10	-6.03	668.13	0.00	0.00	0.00	
13,000.00	90.00	359.46	12,046.00	768.09	-6.96	768.13	0.00	0.00	0.00	
13,100.00	90.00	359.46	12,046.00	868.09	-7.90	868.13	0.00	0.00	0.00	
13,200.00	90.00	359.46	12,046.00	968.09	-8.84	968.13	0.00	0.00	0.00	
13,300.00	90.00	359.46	12,046.00	1,068.08	-9.78	1,068.13	0.00	0.00	0.00	
13,400.00	90.00	359.46	12,046.00	1,168.08	-10.71	1,168.13	0.00	0.00	0.00	
13,500.00	90.00	359.46	12,046.00	1,268.07	-11.65	1,268.13	0.00	0.00	0.00	
13,600.00	90.00	359.46	12,046.00	1,368.07	-12.59	1,368.13	0.00	0.00	0.00	
13,700.00	90.00	359.46	12,046.00	1,468.06	-13.53	1,468.13	0.00	0.00	0.00	
13,800.00	90.00	359.46	12,046.00	1,568.06	-14.47	1,568.13	0.00	0.00	0.00	
13,900.00	90.00	359.46	12,046.00	1,668.05	-15.40	1,668.13	0.00	0.00	0.00	
14,000.00	90.00	359.46	12,046.00	1,768.05	-16.34	1,768.13	0.00	0.00	0.00	
14,100.00	90.00	359.46	12,046.00	1,868.05	-17.28	1,868.13	0.00	0.00	0.00	
14,200.00	90.00	359.46	12,046.00	1,968.04	-18.22	1,968.13	0.00	0.00	0.00	
14,300.00	90.00	359.46	12,046.00	2,068.04	-19.15	2,068.13	0.00	0.00	0.00	
14,400.00	90.00	359.46	12,046.00	2,168.03	-20.09	2,168.13	0.00	0.00	0.00	
14,500.00	90.00	359.46	12,046.00	2,268.03	-21.03	2,268.13	0.00	0.00	0.00	
14,600.00	90.00	359.46	12,046.00	2,368.02	-21.97	2,368.13	0.00	0.00	0.00	
14,700.00	90.00	359.46	12,046.00	2,468.02	-22.91	2,468.13	0.00	0.00	0.00	

Premier Directional Drilling

Planning Report

Database:	EDM 5000 14 Multi User	Local Co-ordinate Reference:	Well 453H
Company:	ENERGEN RESOURCES CORPORATION	TVD Reference:	3331+25 @ 3356.00usft
Project:	Lea County, NM	MD Reference:	3331+25 @ 3356.00usft
Site:	Brahman State Corn 15-10 453H	North Reference:	Grid
Well:	453H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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)
14,800.00	90.00	359.46	12,046.00	2,568.01	-23.84	2,568.13	0.00	0.00	0.00
14,900.00	90.00	359.46	12,046.00	2,668.01	-24.78	2,668.13	0.00	0.00	0.00
15,000.00	90.00	359.46	12,046.00	2,768.01	-25.72	2,768.13	0.00	0.00	0.00
15,100.00	90.00	359.46	12,046.00	2,868.00	-26.66	2,868.13	0.00	0.00	0.00
15,200.00	90.00	359.46	12,046.00	2,968.00	-27.59	2,968.13	0.00	0.00	0.00
15,300.00	90.00	359.46	12,046.00	3,067.99	-28.53	3,068.13	0.00	0.00	0.00
15,400.00	90.00	359.46	12,046.00	3,167.99	-29.47	3,168.13	0.00	0.00	0.00
15,500.00	90.00	359.46	12,046.00	3,267.98	-30.41	3,268.13	0.00	0.00	0.00
15,600.00	90.00	359.46	12,046.00	3,367.98	-31.35	3,368.13	0.00	0.00	0.00
15,700.00	90.00	359.46	12,046.00	3,467.98	-32.28	3,468.13	0.00	0.00	0.00
15,800.00	90.00	359.46	12,046.00	3,567.97	-33.22	3,568.13	0.00	0.00	0.00
15,900.00	90.00	359.46	12,046.00	3,667.97	-34.16	3,668.13	0.00	0.00	0.00
16,000.00	90.00	359.46	12,046.00	3,767.96	-35.10	3,768.13	0.00	0.00	0.00
16,100.00	90.00	359.46	12,046.00	3,867.96	-36.03	3,868.13	0.00	0.00	0.00
16,200.00	90.00	359.46	12,046.00	3,967.95	-36.97	3,968.13	0.00	0.00	0.00
16,300.00	90.00	359.46	12,046.00	4,067.95	-37.91	4,068.13	0.00	0.00	0.00
16,400.00	90.00	359.46	12,046.00	4,167.94	-38.85	4,168.13	0.00	0.00	0.00
16,500.00	90.00	359.46	12,046.00	4,267.94	-39.79	4,268.13	0.00	0.00	0.00
16,600.00	90.00	359.46	12,046.00	4,367.94	-40.72	4,368.13	0.00	0.00	0.00
16,700.00	90.00	359.46	12,046.00	4,467.93	-41.66	4,468.13	0.00	0.00	0.00
16,800.00	90.00	359.46	12,046.00	4,567.93	-42.60	4,568.13	0.00	0.00	0.00
16,900.00	90.00	359.46	12,046.00	4,667.92	-43.54	4,668.13	0.00	0.00	0.00
17,000.00	90.00	359.46	12,046.00	4,767.92	-44.47	4,768.13	0.00	0.00	0.00
17,100.00	90.00	359.46	12,046.00	4,867.91	-45.41	4,868.13	0.00	0.00	0.00
17,200.00	90.00	359.46	12,046.00	4,967.91	-46.35	4,968.13	0.00	0.00	0.00
17,300.00	90.00	359.46	12,046.00	5,067.91	-47.29	5,068.13	0.00	0.00	0.00
17,400.00	90.00	359.46	12,046.00	5,167.90	-48.23	5,168.13	0.00	0.00	0.00
17,500.00	90.00	359.46	12,046.00	5,267.90	-49.16	5,268.13	0.00	0.00	0.00
17,600.00	90.00	359.46	12,046.00	5,367.89	-50.10	5,368.13	0.00	0.00	0.00
17,700.00	90.00	359.46	12,046.00	5,467.89	-51.04	5,468.13	0.00	0.00	0.00
17,800.00	90.00	359.46	12,046.00	5,567.88	-51.98	5,568.13	0.00	0.00	0.00
17,900.00	90.00	359.46	12,046.00	5,667.88	-52.91	5,668.13	0.00	0.00	0.00
18,000.00	90.00	359.46	12,046.00	5,767.87	-53.85	5,768.13	0.00	0.00	0.00
18,100.00	90.00	359.46	12,046.00	5,867.87	-54.79	5,868.13	0.00	0.00	0.00
18,200.00	90.00	359.46	12,046.00	5,967.87	-55.73	5,968.13	0.00	0.00	0.00
18,300.00	90.00	359.46	12,046.00	6,067.86	-56.67	6,068.13	0.00	0.00	0.00
18,400.00	90.00	359.46	12,046.00	6,167.86	-57.60	6,168.13	0.00	0.00	0.00
18,500.00	90.00	359.46	12,046.00	6,267.85	-58.54	6,268.13	0.00	0.00	0.00
18,600.00	90.00	359.46	12,046.00	6,367.85	-59.48	6,368.13	0.00	0.00	0.00
18,700.00	90.00	359.46	12,046.00	6,467.84	-60.42	6,468.13	0.00	0.00	0.00
18,800.00	90.00	359.46	12,046.00	6,567.84	-61.35	6,568.13	0.00	0.00	0.00
18,900.00	90.00	359.46	12,046.00	6,667.83	-62.29	6,668.13	0.00	0.00	0.00
19,000.00	90.00	359.46	12,046.00	6,767.83	-63.23	6,768.13	0.00	0.00	0.00
19,100.00	90.00	359.46	12,046.00	6,867.83	-64.17	6,868.13	0.00	0.00	0.00
19,200.00	90.00	359.46	12,046.00	6,967.82	-65.11	6,968.13	0.00	0.00	0.00
19,300.00	90.00	359.46	12,046.00	7,067.82	-66.04	7,068.13	0.00	0.00	0.00
19,400.00	90.00	359.46	12,046.00	7,167.81	-66.98	7,168.13	0.00	0.00	0.00
19,500.00	90.00	359.46	12,046.00	7,267.81	-67.92	7,268.13	0.00	0.00	0.00
19,600.00	90.00	359.46	12,046.00	7,367.80	-68.86	7,368.13	0.00	0.00	0.00
19,700.00	90.00	359.46	12,046.00	7,467.80	-69.79	7,468.13	0.00	0.00	0.00
19,800.00	90.00	359.46	12,046.00	7,567.80	-70.73	7,568.13	0.00	0.00	0.00
19,900.00	90.00	359.46	12,046.00	7,667.79	-71.67	7,668.13	0.00	0.00	0.00
20,000.00	90.00	359.46	12,046.00	7,767.79	-72.61	7,768.13	0.00	0.00	0.00
20,100.00	90.00	359.46	12,046.00	7,867.78	-73.54	7,868.13	0.00	0.00	0.00

Premier Directional Drilling

Planning Report

Database:	EDM 5000 14 Multi User	Local Co-ordinate Reference:	Well 453H
Company:	ENERGEN RESOURCES CORPORATION	TVD Reference:	3331+25 @ 3356.00usft
Project:	Lea County, NM	MD Reference:	3331+25 @ 3356.00usft
Site:	Brahman State Com 15-10 453H	North Reference:	Grid
Well:	453H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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)
20,200.00	90.00	359.46	12,046.00	7,967.78	-74.48	7,968.13	0.00	0.00	0.00
20,300.00	90.00	359.46	12,046.00	8,067.77	-75.42	8,068.13	0.00	0.00	0.00
20,400.00	90.00	359.46	12,046.00	8,167.77	-76.36	8,168.13	0.00	0.00	0.00
20,500.00	90.00	359.46	12,046.00	8,267.76	-77.30	8,268.13	0.00	0.00	0.00
20,600.00	90.00	359.46	12,046.00	8,367.76	-78.23	8,368.13	0.00	0.00	0.00
20,700.00	90.00	359.46	12,046.00	8,467.76	-79.17	8,468.13	0.00	0.00	0.00
20,800.00	90.00	359.46	12,046.00	8,567.75	-80.11	8,568.13	0.00	0.00	0.00
20,900.00	90.00	359.46	12,046.00	8,667.75	-81.05	8,668.13	0.00	0.00	0.00
21,000.00	90.00	359.46	12,046.00	8,767.74	-81.98	8,768.13	0.00	0.00	0.00
21,100.00	90.00	359.46	12,046.00	8,867.74	-82.92	8,868.13	0.00	0.00	0.00
21,200.00	90.00	359.46	12,046.00	8,967.73	-83.86	8,968.13	0.00	0.00	0.00
21,300.00	90.00	359.46	12,046.00	9,067.73	-84.80	9,068.13	0.00	0.00	0.00
21,400.00	90.00	359.46	12,046.00	9,167.72	-85.74	9,168.13	0.00	0.00	0.00
21,500.00	90.00	359.46	12,046.00	9,267.72	-86.67	9,268.13	0.00	0.00	0.00
21,600.00	90.00	359.46	12,046.00	9,367.72	-87.61	9,368.13	0.00	0.00	0.00
21,700.00	90.00	359.46	12,046.00	9,467.71	-88.55	9,468.13	0.00	0.00	0.00
21,800.00	90.00	359.46	12,046.00	9,567.71	-89.49	9,568.13	0.00	0.00	0.00
21,900.00	90.00	359.46	12,046.00	9,667.70	-90.42	9,668.13	0.00	0.00	0.00
22,000.00	90.00	359.46	12,046.00	9,767.70	-91.36	9,768.13	0.00	0.00	0.00
22,100.00	90.00	359.46	12,046.00	9,867.69	-92.30	9,868.13	0.00	0.00	0.00
22,185.96	90.00	359.46	12,046.00	9,953.65	-93.11	9,954.09	0.00	0.00	0.00

Project: Lea County, NM
Site: Brahman State Com 15-10 453H
Well: 453H
Wellbore: Lateral
Design: Plan #2
Rig: XXXXXX
Job: XXXXXX



Name		TVD	N-S	E-W	North	East	Lat	Long
Brahman State	Com 15-10 #453 SL	0.00	0.00	0.00	442050.14	802275.24	32° 12' 41.53 N	103° 21' 21.62 W
Brahman State	Com 15-10 #453 NP p2	9090.00	-407.88	4.07	441642.16	802276.31	32° 12' 37.48 N	103° 21' 21.62 W
Brahman State	Com 15-10 #453 LP p2	12048.00	164.95	-1.31	442215.09	802273.93	32° 12' 43.16 N	103° 21' 21.62 W
Brahman State	Com 15-10 #453 PBH LP	12048.00	9953.36	-93.11	452003.79	802182.13	32° 14' 20.09 N	103° 21' 21.65 W

SECTION DETAILS									
MD	Inc	Az	TVD	+N/S	+E/W	Dip	Trace	Vsht	
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
5300 00	0 00	0 00	5300 00	0 00	0 00	0 00	0 00	0 00	
5766 69	7 00	79 43	6795 93	-28 47	0 28	1 50	174 43	-28 47	
6047 43	7 00	79 43	6824 47	-27 51	3 76	1 50	174 43	-27 51	
9113 79	0 00	0 00	9090 00	-407 98	0 00	1 50	183 00	-40 00	
1498 93	0 00	0 00	11475 04	-407 98	0 00	0 00	0 00	-40 00	
2396 83	90 00	358 48	12044 05	-1 31	0 00	0 00	358 48	-16 94	
90 00	358 48	12044 05	9933 85	-93 11	0 00	0 00	9954 09		Brahman State Com 15-16



Azimuths to Grid North
True North: -0.52°
Magnetic North: 8.25°

Magnetic Field
Strength: 47962.6nT
Dip Angle: 59.88°
Date: 06/26/2018
Model: HDGM

