

Devon Energy

Lea County, NM (NAD-83)

Thistle Unit Sec 22-27 Trac Pad

Thistle Unit 126H

OH

Plan: Plan #2

Standard Planning Report

20 September, 2017

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Thistle Unit 126H
Company:	Devon Energy	TVD Reference:	3709.8' GE + 23.5' KB @ 3733.30usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3709.8' GE + 23.5' KB @ 3733.30usft
Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 126H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project	Lea County, NM (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		Thistle Unit Sec 22-27 Trac Pad			
Site Position:		Northing:	472,548.43 usft	Latitude:	32° 17' 48.4331 N
From:	Map	Easting:	777,932.69 usft	Longitude:	103° 34' 3.4563 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41 °

Well	Thistle Unit 126H					
Well Position	+N/-S	41.68 usft	Northing:	472,590.11 usft	Latitude:	32° 17' 48.5412 N
	+E/-W	4,269.16 usft	Easting:	782,201.85 usft	Longitude:	103° 33' 13.7172 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,709.80 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/20/2017	6.83	60.12	48,166

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	184.21

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	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	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,127.54	6.28	262.66	3,126.28	-4.39	-34.05	1.00	1.00	0.00	262.66	
8,227.57	6.28	262.66	8,195.76	-75.61	-586.95	0.00	0.00	0.00	0.00	
8,855.11	0.00	0.01	8,822.04	-80.00	-621.00	1.00	-1.00	0.00	180.00	
9,155.11	0.00	0.01	9,122.04	-80.00	-621.00	0.00	0.00	0.00	0.01	
10,054.29	89.92	179.58	9,695.00	-652.13	-616.81	10.00	10.00	19.97	179.58	
17,074.97	89.92	179.58	9,705.00	-7,672.61	-565.43	0.00	0.00	0.00	0.00	PBHL (TU 126)

LEAM Drilling Systems LLC

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Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 126H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	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
SHL (TU 126)									
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
Start Build 1.00									
2,600.00	1.00	262.66	2,599.99	-0.11	-0.87	0.17	1.00	1.00	0.00
2,700.00	2.00	262.66	2,699.96	-0.45	-3.46	0.70	1.00	1.00	0.00
2,800.00	3.00	262.66	2,799.86	-1.00	-7.79	1.57	1.00	1.00	0.00
2,900.00	4.00	262.66	2,899.68	-1.78	-13.84	2.80	1.00	1.00	0.00
3,000.00	5.00	262.66	2,999.37	-2.79	-21.62	4.37	1.00	1.00	0.00
3,100.00	6.00	262.66	3,098.90	-4.01	-31.13	6.29	1.00	1.00	0.00
3,127.54	6.28	262.66	3,126.28	-4.39	-34.05	6.88	1.00	1.00	0.00
Start 5100.03 hold at 3127.54 MD									
3,200.00	6.28	262.66	3,198.31	-5.40	-41.91	8.46	0.00	0.00	0.00
3,300.00	6.28	262.66	3,297.71	-6.80	-52.75	10.65	0.00	0.00	0.00
3,400.00	6.28	262.66	3,397.11	-8.19	-63.59	12.84	0.00	0.00	0.00
3,500.00	6.28	262.66	3,496.51	-9.59	-74.43	15.03	0.00	0.00	0.00
3,600.00	6.28	262.66	3,595.92	-10.98	-85.27	17.22	0.00	0.00	0.00
3,700.00	6.28	262.66	3,695.32	-12.38	-96.11	19.41	0.00	0.00	0.00
3,800.00	6.28	262.66	3,794.72	-13.78	-106.95	21.60	0.00	0.00	0.00
3,900.00	6.28	262.66	3,894.12	-15.17	-117.79	23.79	0.00	0.00	0.00
4,000.00	6.28	262.66	3,993.52	-16.57	-128.63	25.98	0.00	0.00	0.00
4,100.00	6.28	262.66	4,092.92	-17.97	-139.48	28.17	0.00	0.00	0.00
4,200.00	6.28	262.66	4,192.32	-19.36	-150.32	30.36	0.00	0.00	0.00
4,300.00	6.28	262.66	4,291.72	-20.76	-161.16	32.55	0.00	0.00	0.00
4,400.00	6.28	262.66	4,391.12	-22.16	-172.00	34.74	0.00	0.00	0.00
4,500.00	6.28	262.66	4,490.52	-23.55	-182.84	36.93	0.00	0.00	0.00
4,600.00	6.28	262.66	4,589.92	-24.95	-193.68	39.12	0.00	0.00	0.00
4,700.00	6.28	262.66	4,689.32	-26.35	-204.52	41.31	0.00	0.00	0.00
4,800.00	6.28	262.66	4,788.72	-27.74	-215.36	43.50	0.00	0.00	0.00

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Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.00	6.28	262.66	4,888.13	-29.14	-226.20	45.69	0.00	0.00	0.00
5,000.00	6.28	262.66	4,987.53	-30.54	-237.05	47.88	0.00	0.00	0.00
5,100.00	6.28	262.66	5,086.93	-31.93	-247.89	50.07	0.00	0.00	0.00
5,200.00	6.28	262.66	5,186.33	-33.33	-258.73	52.26	0.00	0.00	0.00
5,300.00	6.28	262.66	5,285.73	-34.73	-269.57	54.45	0.00	0.00	0.00
5,400.00	6.28	262.66	5,385.13	-36.12	-280.41	56.63	0.00	0.00	0.00
5,500.00	6.28	262.66	5,484.53	-37.52	-291.25	58.82	0.00	0.00	0.00
5,600.00	6.28	262.66	5,583.93	-38.92	-302.09	61.01	0.00	0.00	0.00
5,700.00	6.28	262.66	5,683.33	-40.31	-312.93	63.20	0.00	0.00	0.00
5,800.00	6.28	262.66	5,782.73	-41.71	-323.77	65.39	0.00	0.00	0.00
5,900.00	6.28	262.66	5,882.13	-43.11	-334.62	67.58	0.00	0.00	0.00
6,000.00	6.28	262.66	5,981.53	-44.50	-345.46	69.77	0.00	0.00	0.00
6,100.00	6.28	262.66	6,080.94	-45.90	-356.30	71.96	0.00	0.00	0.00
6,200.00	6.28	262.66	6,180.34	-47.30	-367.14	74.15	0.00	0.00	0.00
6,300.00	6.28	262.66	6,279.74	-48.69	-377.98	76.34	0.00	0.00	0.00
6,400.00	6.28	262.66	6,379.14	-50.09	-388.82	78.53	0.00	0.00	0.00
6,500.00	6.28	262.66	6,478.54	-51.49	-399.66	80.72	0.00	0.00	0.00
6,600.00	6.28	262.66	6,577.94	-52.88	-410.50	82.91	0.00	0.00	0.00
6,700.00	6.28	262.66	6,677.34	-54.28	-421.34	85.10	0.00	0.00	0.00
6,800.00	6.28	262.66	6,776.74	-55.68	-432.19	87.29	0.00	0.00	0.00
6,900.00	6.28	262.66	6,876.14	-57.07	-443.03	89.48	0.00	0.00	0.00
7,000.00	6.28	262.66	6,975.54	-58.47	-453.87	91.67	0.00	0.00	0.00
7,100.00	6.28	262.66	7,074.94	-59.87	-464.71	93.86	0.00	0.00	0.00
7,200.00	6.28	262.66	7,174.34	-61.26	-475.55	96.05	0.00	0.00	0.00
7,300.00	6.28	262.66	7,273.75	-62.66	-486.39	98.24	0.00	0.00	0.00
7,400.00	6.28	262.66	7,373.15	-64.06	-497.23	100.43	0.00	0.00	0.00
7,500.00	6.28	262.66	7,472.55	-65.45	-508.07	102.62	0.00	0.00	0.00
7,600.00	6.28	262.66	7,571.95	-66.85	-518.91	104.81	0.00	0.00	0.00
7,700.00	6.28	262.66	7,671.35	-68.25	-529.76	107.00	0.00	0.00	0.00
7,800.00	6.28	262.66	7,770.75	-69.64	-540.60	109.19	0.00	0.00	0.00
7,900.00	6.28	262.66	7,870.15	-71.04	-551.44	111.37	0.00	0.00	0.00
8,000.00	6.28	262.66	7,969.55	-72.44	-562.28	113.56	0.00	0.00	0.00
8,100.00	6.28	262.66	8,068.95	-73.83	-573.12	115.75	0.00	0.00	0.00
8,200.00	6.28	262.66	8,168.35	-75.23	-583.96	117.94	0.00	0.00	0.00
8,227.57	6.28	262.66	8,195.76	-75.61	-586.95	118.55	0.00	0.00	0.00
Start Drop -1.00									
8,300.00	5.55	262.66	8,267.80	-76.57	-594.35	120.04	1.00	-1.00	0.00
8,400.00	4.55	262.66	8,367.41	-77.69	-603.08	121.81	1.00	-1.00	0.00
8,500.00	3.55	262.66	8,467.16	-78.59	-610.09	123.22	1.00	-1.00	0.00
8,600.00	2.55	262.66	8,567.02	-79.27	-615.37	124.29	1.00	-1.00	0.00
8,700.00	1.55	262.66	8,666.95	-79.73	-618.92	125.00	1.00	-1.00	0.00
8,800.00	0.55	262.66	8,766.93	-79.97	-620.74	125.37	1.00	-1.00	0.00
8,855.11	0.00	0.00	8,822.04	-80.00	-621.00	125.42	1.00	-1.00	0.00
Start 300.00 hold at 8855.11 MD									
8,900.00	0.00	0.00	8,866.93	-80.00	-621.00	125.42	0.00	0.00	0.00
9,000.00	0.00	0.00	8,966.93	-80.00	-621.00	125.42	0.00	0.00	0.00
9,100.00	0.00	0.00	9,066.93	-80.00	-621.00	125.42	0.00	0.00	0.00
9,155.11	0.00	0.00	9,122.04	-80.00	-621.00	125.42	0.00	0.00	0.00
Start DLS 10.00 TFO 179.58									
9,200.00	4.49	179.58	9,166.89	-81.76	-620.99	127.18	10.00	10.00	0.00
9,250.00	9.49	179.58	9,216.50	-87.84	-620.94	133.24	10.00	10.00	0.00
9,300.00	14.49	179.58	9,265.39	-98.22	-620.87	143.59	10.00	10.00	0.00
9,350.00	19.49	179.58	9,313.20	-112.83	-620.76	158.15	10.00	10.00	0.00

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,400.00	24.49	179.58	9,359.54	-131.54	-620.62	176.80	10.00	10.00	0.00
9,450.00	29.49	179.58	9,404.08	-154.23	-620.46	199.41	10.00	10.00	0.00
9,500.00	34.49	179.58	9,446.48	-180.70	-620.26	225.80	10.00	10.00	0.00
9,550.00	39.49	179.58	9,486.40	-210.78	-620.04	255.78	10.00	10.00	0.00
9,600.00	44.49	179.58	9,523.56	-244.22	-619.80	289.11	10.00	10.00	0.00
9,650.00	49.49	179.58	9,557.65	-280.76	-619.53	325.54	10.00	10.00	0.00
9,700.00	54.49	179.58	9,588.43	-320.15	-619.24	364.79	10.00	10.00	0.00
9,750.00	59.49	179.58	9,615.66	-362.06	-618.94	406.57	10.00	10.00	0.00
9,800.00	64.49	179.58	9,639.14	-406.19	-618.61	450.55	10.00	10.00	0.00
9,850.00	69.49	179.58	9,658.68	-452.19	-618.28	496.41	10.00	10.00	0.00
9,900.00	74.49	179.58	9,674.13	-499.73	-617.93	543.79	10.00	10.00	0.00
9,950.00	79.49	179.58	9,685.38	-548.43	-617.57	592.33	10.00	10.00	0.00
10,000.00	84.49	179.58	9,692.35	-597.92	-617.21	641.67	10.00	10.00	0.00
10,054.29	89.92	179.58	9,695.00	-652.13	-616.81	695.70	10.00	10.00	0.00
Start 7020.68 hold at 10054.29 MD									
10,100.00	89.92	179.58	9,695.06	-697.83	-616.48	741.26	0.00	0.00	0.00
10,200.00	89.92	179.58	9,695.21	-797.83	-615.75	840.93	0.00	0.00	0.00
10,300.00	89.92	179.58	9,695.35	-897.83	-615.01	940.60	0.00	0.00	0.00
10,400.00	89.92	179.58	9,695.49	-997.83	-614.28	1,040.27	0.00	0.00	0.00
10,500.00	89.92	179.58	9,695.63	-1,097.82	-613.55	1,139.95	0.00	0.00	0.00
10,600.00	89.92	179.58	9,695.77	-1,197.82	-612.82	1,239.62	0.00	0.00	0.00
10,700.00	89.92	179.58	9,695.92	-1,297.82	-612.09	1,339.29	0.00	0.00	0.00
10,800.00	89.92	179.58	9,696.06	-1,397.81	-611.35	1,438.97	0.00	0.00	0.00
10,900.00	89.92	179.58	9,696.20	-1,497.81	-610.62	1,538.64	0.00	0.00	0.00
11,000.00	89.92	179.58	9,696.34	-1,597.81	-609.89	1,638.31	0.00	0.00	0.00
11,100.00	89.92	179.58	9,696.49	-1,697.81	-609.16	1,737.99	0.00	0.00	0.00
11,200.00	89.92	179.58	9,696.63	-1,797.80	-608.43	1,837.66	0.00	0.00	0.00
11,300.00	89.92	179.58	9,696.77	-1,897.80	-607.70	1,937.33	0.00	0.00	0.00
11,400.00	89.92	179.58	9,696.91	-1,997.80	-606.96	2,037.00	0.00	0.00	0.00
11,500.00	89.92	179.58	9,697.06	-2,097.80	-606.23	2,136.68	0.00	0.00	0.00
11,600.00	89.92	179.58	9,697.20	-2,197.79	-605.50	2,236.35	0.00	0.00	0.00
11,700.00	89.92	179.58	9,697.34	-2,297.79	-604.77	2,336.02	0.00	0.00	0.00
11,800.00	89.92	179.58	9,697.48	-2,397.79	-604.04	2,435.70	0.00	0.00	0.00
11,900.00	89.92	179.58	9,697.63	-2,497.78	-603.30	2,535.37	0.00	0.00	0.00
12,000.00	89.92	179.58	9,697.77	-2,597.78	-602.57	2,635.04	0.00	0.00	0.00
12,100.00	89.92	179.58	9,697.91	-2,697.78	-601.84	2,734.72	0.00	0.00	0.00
12,200.00	89.92	179.58	9,698.05	-2,797.78	-601.11	2,834.39	0.00	0.00	0.00
12,300.00	89.92	179.58	9,698.20	-2,897.77	-600.38	2,934.06	0.00	0.00	0.00
12,400.00	89.92	179.58	9,698.34	-2,997.77	-599.64	3,033.73	0.00	0.00	0.00
12,500.00	89.92	179.58	9,698.48	-3,097.77	-598.91	3,133.41	0.00	0.00	0.00
12,600.00	89.92	179.58	9,698.62	-3,197.76	-598.18	3,233.08	0.00	0.00	0.00
12,700.00	89.92	179.58	9,698.77	-3,297.76	-597.45	3,332.75	0.00	0.00	0.00
12,800.00	89.92	179.58	9,698.91	-3,397.76	-596.72	3,432.43	0.00	0.00	0.00
12,900.00	89.92	179.58	9,699.05	-3,497.76	-595.99	3,532.10	0.00	0.00	0.00
13,000.00	89.92	179.58	9,699.19	-3,597.75	-595.25	3,631.77	0.00	0.00	0.00
13,100.00	89.92	179.58	9,699.34	-3,697.75	-594.52	3,731.45	0.00	0.00	0.00
13,200.00	89.92	179.58	9,699.48	-3,797.75	-593.79	3,831.12	0.00	0.00	0.00
13,300.00	89.92	179.58	9,699.62	-3,897.75	-593.06	3,930.79	0.00	0.00	0.00
13,400.00	89.92	179.58	9,699.76	-3,997.74	-592.33	4,030.46	0.00	0.00	0.00
13,500.00	89.92	179.58	9,699.91	-4,097.74	-591.59	4,130.14	0.00	0.00	0.00
13,600.00	89.92	179.58	9,700.05	-4,197.74	-590.86	4,229.81	0.00	0.00	0.00
13,700.00	89.92	179.58	9,700.19	-4,297.73	-590.13	4,329.48	0.00	0.00	0.00
13,800.00	89.92	179.58	9,700.33	-4,397.73	-589.40	4,429.16	0.00	0.00	0.00
13,900.00	89.92	179.58	9,700.48	-4,497.73	-588.67	4,528.83	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Thistle Unit 126H
Company:	Devon Energy	TVD Reference:	3709.8' GE + 23.5' KB @ 3733.30usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3709.8' GE + 23.5' KB @ 3733.30usft
Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 126H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,000.00	89.92	179.58	9,700.62	-4,597.73	-587.93	4,628.50	0.00	0.00	0.00
14,100.00	89.92	179.58	9,700.76	-4,697.72	-587.20	4,728.18	0.00	0.00	0.00
14,200.00	89.92	179.58	9,700.90	-4,797.72	-586.47	4,827.85	0.00	0.00	0.00
14,300.00	89.92	179.58	9,701.05	-4,897.72	-585.74	4,927.52	0.00	0.00	0.00
14,400.00	89.92	179.58	9,701.19	-4,997.71	-585.01	5,027.19	0.00	0.00	0.00
14,500.00	89.92	179.58	9,701.33	-5,097.71	-584.28	5,126.87	0.00	0.00	0.00
14,600.00	89.92	179.58	9,701.47	-5,197.71	-583.54	5,226.54	0.00	0.00	0.00
14,700.00	89.92	179.58	9,701.62	-5,297.71	-582.81	5,326.21	0.00	0.00	0.00
14,800.00	89.92	179.58	9,701.76	-5,397.70	-582.08	5,425.89	0.00	0.00	0.00
14,900.00	89.92	179.58	9,701.90	-5,497.70	-581.35	5,525.56	0.00	0.00	0.00
15,000.00	89.92	179.58	9,702.04	-5,597.70	-580.62	5,625.23	0.00	0.00	0.00
15,100.00	89.92	179.58	9,702.19	-5,697.70	-579.88	5,724.91	0.00	0.00	0.00
15,200.00	89.92	179.58	9,702.33	-5,797.69	-579.15	5,824.58	0.00	0.00	0.00
15,300.00	89.92	179.58	9,702.47	-5,897.69	-578.42	5,924.25	0.00	0.00	0.00
15,400.00	89.92	179.58	9,702.61	-5,997.69	-577.69	6,023.92	0.00	0.00	0.00
15,500.00	89.92	179.58	9,702.76	-6,097.68	-576.96	6,123.60	0.00	0.00	0.00
15,600.00	89.92	179.58	9,702.90	-6,197.68	-576.22	6,223.27	0.00	0.00	0.00
15,700.00	89.92	179.58	9,703.04	-6,297.68	-575.49	6,322.94	0.00	0.00	0.00
15,800.00	89.92	179.58	9,703.18	-6,397.68	-574.76	6,422.62	0.00	0.00	0.00
15,900.00	89.92	179.58	9,703.33	-6,497.67	-574.03	6,522.29	0.00	0.00	0.00
16,000.00	89.92	179.58	9,703.47	-6,597.67	-573.30	6,621.96	0.00	0.00	0.00
16,100.00	89.92	179.58	9,703.61	-6,697.67	-572.57	6,721.63	0.00	0.00	0.00
16,200.00	89.92	179.58	9,703.75	-6,797.66	-571.83	6,821.31	0.00	0.00	0.00
16,300.00	89.92	179.58	9,703.90	-6,897.66	-571.10	6,920.98	0.00	0.00	0.00
16,400.00	89.92	179.58	9,704.04	-6,997.66	-570.37	7,020.65	0.00	0.00	0.00
16,500.00	89.92	179.58	9,704.18	-7,097.66	-569.64	7,120.33	0.00	0.00	0.00
16,600.00	89.92	179.58	9,704.32	-7,197.65	-568.91	7,220.00	0.00	0.00	0.00
16,700.00	89.92	179.58	9,704.47	-7,297.65	-568.17	7,319.67	0.00	0.00	0.00
16,800.00	89.92	179.58	9,704.61	-7,397.65	-567.44	7,419.35	0.00	0.00	0.00
16,900.00	89.92	179.58	9,704.75	-7,497.65	-566.71	7,519.02	0.00	0.00	0.00
17,000.00	89.92	179.58	9,704.89	-7,597.64	-565.98	7,618.69	0.00	0.00	0.00
17,074.97	89.92	179.58	9,705.00	-7,672.61	-565.43	7,693.42	0.00	0.00	0.00

TD at 17074.97 - PBHL (TU 126)

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (TU 126) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	472,590.11	782,201.85	32° 17' 48.5412 N	103° 33' 13.7172 W
PBHL (TU 126) - plan hits target center - Point	0.00	0.00	9,705.00	-7,672.61	-565.43	464,917.50	781,636.42	32° 16' 32.6610 N	103° 33' 20.9524 W

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Thistle Unit 126H
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Project:	Lea County, NM (NAD-83)	MD Reference:	3709.8' GE + 23.5' KB @ 3733.30usft
Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 126H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,500.00	2,500.00	0.00	0.00	Start Build 1.00
3,127.54	3,126.28	-4.39	-34.05	Start 5100.03 hold at 3127.54 MD
8,227.57	8,195.76	-75.61	-586.95	Start Drop -1.00
8,855.11	8,822.04	-80.00	-621.00	Start 300.00 hold at 8855.11 MD
9,155.11	9,122.04	-80.00	-621.00	Start DLS 10.00 TFO 179.58
10,054.29	9,695.00	-652.13	-616.81	Start 7020.68 hold at 10054.29 MD
17,074.97	9,705.00	-7,672.61	-565.43	TD at 17074.97