

RECEIVED

JAN 29 2019

DISTRICT II-ARTESIA O.C.D



May 16, 2018

30.015-44593

Devon Energy Production Company, LP
Well: Tomb Raider 1-12 Fed Com 234H
County/Parish: Eddy County, NM

LEAM MWD: (OH) from 786' MD – 20,352' MD
Projection; 20,410' MD

This Borehole Survey taken between 04/20/18 and 05/07/18 had been conducted and calculated according to the highest professional standards and complies with all known State and Federal requirements.

Reviewed and Approved:

Date: May 16, 2018

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DISTRICT II-ARTESIA O.C.D.



Survey Certification Form

State of New Mexico

Eddy County

I, Randy W. Rakowitz, certify that; I am employed by LEAM Drilling Services, that I did on the day(s) of 04/20/2018 through 05/07/2018, conduct or supervise the taking of MWD Survey from a depth of 786' MD to 20,410' MD; that the data is true, correct, complete and within the limitations of the tools as set forth by LEAM Drilling Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Devon Energy Production Company, LP for the Tomb Raider 1-12 Fed Com 234H in Eddy County, New Mexico; and that I reviewed this report and find that it conforms to the principals and procedures as set forth by LEAM Drilling Services.

A handwritten signature in black ink, appearing to be 'Randy W. Rakowitz', is written over a horizontal line.

Randy W. Rakowitz
MWD Operations Coordinator

LEAM Drilling Services

Survey Report

JAN 29 2019

DISTRICT II-ARTESIA O.C.D.

Company: Devon Energy
 Project: Eddy County, NM (NAD-83)
 Site: Tomb Raider 1-12 Fed Com
 Well: Tomb Raider 1-12 Fed Com 234H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well Tomb Raider 1-12 Fed Com 234H
 TVD Reference: 3480.0' GE + 23.5' KB @ 3503.50usft
 MD Reference: 3480.0' GE + 23.5' KB @ 3503.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Multi User Db

Project	Eddy 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	Tomb Raider 1-12 Fed Com				
Site Position:		Northing:	487,854.70 usft	Latitude:	32° 20' 23.0068 N
From:	Map	Easting:	728,777.94 usft	Longitude:	103° 43' 35.1116 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32 °

Well	Tomb Raider 1-12 Fed Com 234H					
Well Position	+N/-S	0.00 usft	Northing:	487,855.06 usft	Latitude:	32° 20' 23.0070 N
	+E/-W	0.00 usft	Easting:	728,838.04 usft	Longitude:	103° 43' 34.4111 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,480.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/28/2017	7.02	60.15	48,218

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.68	

Survey Program	Date 5/31/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
138.00	684.00	Survey #1 (OH)	MWD	MWD - Standard	
786.00	20,352.00	Survey #2 (OH)	LEAM MWD+HDGM	MWD+HDGM	
20,410.00	20,410.00	Survey #3 (OH)	Project	Projection	

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
138.00	0.60	307.00	138.00	0.43	-0.58	-0.44	0.43	0.43	0.00
196.00	0.80	305.60	195.99	0.85	-1.15	-0.86	0.35	0.34	-2.41
297.00	0.80	311.10	296.98	1.73	-2.25	-1.74	0.08	0.00	5.45
419.00	0.90	307.40	418.97	2.87	-3.66	-2.89	0.09	0.08	-3.03
510.00	0.90	306.50	509.96	3.73	-4.80	-3.76	0.02	0.00	-0.99
601.00	0.90	303.20	600.95	4.54	-5.97	-4.58	0.06	0.00	-3.63
684.00	0.90	301.70	683.94	5.24	-7.07	-5.28	0.03	0.00	-1.81
786.00	0.70	290.60	785.93	5.88	-8.34	-5.93	0.25	-0.20	-10.88

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Tomb Raider 1-12 Fed Com 234H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Site:	Tomb Raider 1-12 Fed Com	MD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Well:	Tomb Raider 1-12 Fed Com 234H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

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)
877.00	0.50	304.60	876.92	6.31	-9.18	-6.36	0.27	-0.22	15.38
969.00	0.40	271.40	968.92	6.54	-9.83	-6.60	0.30	-0.11	-36.09
1,059.00	0.40	270.20	1,058.92	6.55	-10.46	-6.61	0.01	0.00	-1.33
1,150.00	0.30	278.30	1,149.92	6.59	-11.02	-6.65	0.12	-0.11	8.90
1,242.00	0.50	295.10	1,241.91	6.79	-11.62	-6.86	0.25	0.22	18.26
1,333.00	0.50	269.80	1,332.91	6.96	-12.37	-7.03	0.24	0.00	-27.80
1,424.00	0.40	283.70	1,423.91	7.03	-13.08	-7.10	0.16	-0.11	15.27
1,515.00	0.40	272.50	1,514.91	7.12	-13.71	-7.20	0.09	0.00	-12.31
1,607.00	0.30	322.70	1,606.90	7.33	-14.17	-7.41	0.34	-0.11	54.57
1,698.00	0.30	305.70	1,697.90	7.65	-14.51	-7.74	0.10	0.00	-18.68
1,794.00	0.40	270.90	1,793.90	7.81	-15.05	-7.89	0.24	0.10	-36.25
1,889.00	0.10	258.90	1,888.90	7.80	-15.46	-7.88	0.32	-0.32	-12.63
1,984.00	0.30	90.40	1,983.90	7.78	-15.30	-7.86	0.42	0.21	-177.37
2,079.00	0.30	59.10	2,078.90	7.90	-14.83	-7.99	0.17	0.00	-32.95
2,174.00	0.40	62.40	2,173.90	8.19	-14.33	-8.27	0.11	0.11	3.47
2,269.00	0.30	61.50	2,268.89	8.46	-13.81	-8.53	0.11	-0.11	-0.95
2,365.00	0.30	78.10	2,364.89	8.63	-13.35	-8.70	0.09	0.00	17.29
2,459.00	0.30	73.10	2,458.89	8.75	-12.87	-8.82	0.03	0.00	-5.32
2,554.00	0.60	68.40	2,553.89	9.01	-12.17	-9.08	0.32	0.32	-4.95
2,649.00	1.30	82.80	2,648.88	9.33	-10.64	-9.38	0.77	0.74	15.16
2,744.00	2.10	85.40	2,743.83	9.60	-7.83	-9.64	0.85	0.84	2.74
2,840.00	2.70	82.80	2,839.75	10.02	-3.84	-10.05	0.64	0.63	-2.71
2,934.00	3.30	78.90	2,933.62	10.82	1.01	-10.82	0.67	0.64	-4.15
3,029.00	4.30	78.20	3,028.41	12.08	7.18	-12.04	1.05	1.05	-0.74
3,125.00	5.00	78.60	3,124.09	13.64	14.81	-13.56	0.73	0.73	0.42
3,220.00	5.50	74.50	3,218.69	15.68	23.25	-15.55	0.66	0.53	-4.32
3,315.00	5.50	73.80	3,313.26	18.16	32.01	-17.98	0.07	0.00	-0.74
3,410.00	5.00	74.40	3,407.86	20.55	40.37	-20.32	0.53	-0.53	0.63
3,505.00	5.30	74.70	3,502.47	22.82	48.59	-22.55	0.32	0.32	0.32
3,601.00	6.20	77.20	3,597.99	25.14	57.92	-24.81	0.97	0.94	2.60
3,696.00	6.20	80.70	3,692.43	27.10	67.99	-26.72	0.40	0.00	3.68
3,792.00	6.00	84.60	3,787.89	28.41	78.10	-27.97	0.48	-0.21	4.06
3,887.00	5.30	84.70	3,882.43	29.28	87.41	-28.79	0.74	-0.74	0.11
3,982.00	5.40	82.60	3,977.02	30.26	96.21	-29.73	0.23	0.11	-2.21
4,077.00	6.30	79.60	4,071.52	31.78	105.77	-31.19	1.00	0.95	-3.16
4,172.00	6.20	80.30	4,165.96	33.59	115.96	-32.94	0.13	-0.11	0.74
4,268.00	6.10	82.80	4,261.40	35.10	126.13	-34.39	0.30	-0.10	2.60
4,364.00	5.90	77.50	4,356.88	36.81	136.00	-36.05	0.61	-0.21	-5.52
4,459.00	6.00	73.00	4,451.37	39.31	145.52	-38.50	0.50	0.11	-4.74
4,554.00	5.40	71.20	4,545.90	42.21	154.50	-41.34	0.66	-0.63	-1.89
4,649.00	4.90	69.80	4,640.51	45.05	162.54	-44.14	0.54	-0.53	-1.47
4,745.00	5.10	74.00	4,736.15	47.64	170.49	-46.69	0.43	0.21	4.38
4,841.00	5.70	76.10	4,831.72	49.96	179.22	-48.96	0.66	0.63	2.19

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Tomb Raider 1-12 Fed Com 234H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Site:	Tomb Raider 1-12 Fed Com	MD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Well:	Tomb Raider 1-12 Fed Com 234H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

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)
4,936.00	5.80	77.90	4,926.24	52.10	188.49	-51.05	0.22	0.11	1.89
5,032.00	5.50	79.30	5,021.78	53.97	197.75	-52.87	0.34	-0.31	1.46
5,128.00	5.70	78.60	5,117.32	55.77	206.95	-54.61	0.22	0.21	-0.73
5,223.00	6.30	80.20	5,211.80	57.59	216.71	-56.38	0.66	0.63	1.68
5,319.00	6.00	81.90	5,307.25	59.19	226.87	-57.92	0.37	-0.31	1.77
5,414.00	6.00	78.20	5,401.73	60.91	236.64	-59.58	0.41	0.00	-3.89
5,510.00	5.80	74.40	5,497.22	63.24	246.23	-61.86	0.46	-0.21	-3.96
5,605.00	5.50	75.20	5,591.76	65.69	255.25	-64.26	0.33	-0.32	0.84
5,700.00	5.60	75.10	5,686.31	68.05	264.13	-66.57	0.11	0.11	-0.11
5,795.00	6.30	74.50	5,780.80	70.63	273.63	-69.10	0.74	0.74	-0.63
5,891.00	6.30	73.70	5,876.22	73.52	283.76	-71.93	0.09	0.00	-0.83
5,962.00	6.00	72.80	5,946.81	75.71	291.05	-74.08	0.44	-0.42	-1.27
6,087.00	5.50	71.90	6,071.18	79.50	302.98	-77.81	0.41	-0.40	-0.72
6,182.00	5.10	72.60	6,165.77	82.18	311.34	-80.44	0.43	-0.42	0.74
6,278.00	4.70	72.10	6,261.42	84.66	319.15	-82.88	0.42	-0.42	-0.52
6,373.00	5.20	74.50	6,356.07	87.01	327.01	-85.18	0.57	0.53	2.53
6,469.00	6.60	73.80	6,451.56	89.71	336.50	-87.83	1.46	1.46	-0.73
6,565.00	6.70	73.70	6,546.91	92.82	347.17	-90.88	0.10	0.10	-0.10
6,660.00	6.20	74.50	6,641.31	95.75	357.43	-93.75	0.53	-0.53	0.84
6,755.00	6.00	76.80	6,735.77	98.25	367.21	-96.20	0.33	-0.21	2.42
6,850.00	5.20	76.10	6,830.32	100.42	376.22	-98.32	0.85	-0.84	-0.74
6,944.00	5.80	73.50	6,923.89	102.79	384.91	-100.64	0.69	0.64	-2.77
7,040.00	5.50	71.70	7,019.42	105.62	393.93	-103.41	0.36	-0.31	-1.88
7,135.00	5.50	73.30	7,113.98	108.35	402.61	-106.10	0.16	0.00	1.68
7,231.00	6.30	77.00	7,209.47	110.86	412.15	-108.56	0.92	0.83	3.85
7,326.00	6.10	77.90	7,303.92	113.09	422.17	-110.73	0.23	-0.21	0.95
7,422.00	5.40	79.30	7,399.43	115.00	431.59	-112.59	0.74	-0.73	1.46
7,517.00	5.70	76.50	7,493.99	116.93	440.57	-114.47	0.43	0.32	-2.95
7,613.00	6.70	75.20	7,589.43	119.47	450.62	-116.96	1.05	1.04	-1.35
7,708.00	6.50	75.10	7,683.80	122.27	461.18	-119.69	0.21	-0.21	-0.11
7,804.00	5.60	77.50	7,779.26	124.68	471.00	-122.05	0.97	-0.94	2.50
7,899.00	6.00	80.30	7,873.77	126.52	480.42	-123.84	0.52	0.42	2.95
7,994.00	6.50	76.70	7,968.21	128.60	490.55	-125.85	0.67	0.53	-3.79
8,090.00	6.10	77.20	8,063.63	130.98	500.81	-128.18	0.42	-0.42	0.52
8,186.00	6.10	71.90	8,159.09	133.69	510.63	-130.84	0.59	0.00	-5.52
8,280.00	5.50	72.30	8,252.60	136.61	519.67	-133.71	0.64	-0.64	0.43
8,376.00	5.40	77.50	8,348.17	138.99	528.46	-136.04	0.52	-0.10	5.42
8,470.00	4.90	74.70	8,441.79	141.01	536.66	-138.01	0.60	-0.53	-2.98
8,565.00	3.70	64.50	8,536.52	143.40	543.34	-140.36	1.49	-1.26	-10.74
8,661.00	3.30	65.00	8,632.34	145.90	548.64	-142.83	0.42	-0.42	0.52
8,756.00	4.40	77.00	8,727.13	147.87	554.67	-144.77	1.43	1.16	12.63
8,852.00	4.10	87.50	8,822.87	148.85	561.68	-145.71	0.87	-0.31	10.94
8,947.00	2.70	79.60	8,917.70	149.40	567.28	-146.23	1.55	-1.47	-8.32

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Tomb Raider 1-12 Fed Com 234H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

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)
9,043.00	2.80	76.70	9,013.59	150.35	571.78	-147.15	0.18	0.10	-3.02
9,139.00	3.80	77.90	9,109.43	151.56	577.17	-148.33	1.04	1.04	1.25
9,235.00	3.10	66.80	9,205.25	153.25	582.67	-149.99	1.00	-0.73	-11.56
9,330.00	3.30	79.80	9,300.11	154.74	587.72	-151.46	0.79	0.21	13.68
9,426.00	3.00	77.90	9,395.96	155.76	592.90	-152.44	0.33	-0.31	-1.98
9,520.00	1.90	79.10	9,489.88	156.57	596.83	-153.23	1.17	-1.17	1.28
9,616.00	2.50	63.30	9,585.80	157.81	600.27	-154.46	0.88	0.63	-16.46
9,711.00	2.00	68.90	9,680.73	159.34	603.67	-155.96	0.57	-0.53	5.89
9,807.00	1.20	63.50	9,776.69	160.39	606.13	-157.00	0.85	-0.83	-5.63
9,903.00	1.20	81.00	9,872.67	161.00	608.02	-157.60	0.38	0.00	18.23
9,998.00	7.30	187.60	9,967.42	155.16	608.20	-151.76	8.14	6.42	112.21
10,094.00	19.30	187.60	10,060.68	133.31	605.29	-129.93	12.50	12.50	0.00
10,142.00	24.90	187.90	10,105.13	115.42	602.85	-112.05	11.67	11.67	0.63
10,189.00	29.00	187.60	10,147.02	94.32	599.98	-90.97	8.73	8.72	-0.64
10,237.00	33.60	185.80	10,188.02	69.56	597.10	-66.22	9.78	9.58	-3.75
10,284.00	38.20	181.20	10,226.09	42.07	595.48	-38.75	11.34	9.79	-9.79
10,301.13	39.77	181.01	10,239.41	31.30	595.27	-27.97	9.19	9.17	-1.10
HL Crossing - 10301.13' MD, 10239.41' TVD									
10,332.00	42.60	180.70	10,262.64	10.98	594.97	-7.65	9.19	9.17	-1.01
10,380.00	47.00	181.10	10,296.69	-22.83	594.43	26.15	9.19	9.17	0.83
10,428.00	50.00	180.70	10,328.49	-58.78	593.87	62.09	6.28	6.25	-0.83
10,475.00	52.40	179.30	10,357.94	-95.40	593.88	98.72	5.61	5.11	-2.98
10,523.00	55.60	178.10	10,386.15	-134.22	594.77	137.54	6.97	6.67	-2.50
10,571.00	58.90	177.50	10,412.11	-174.55	596.32	177.88	6.95	6.88	-1.25
10,619.00	63.00	178.80	10,435.42	-216.48	597.67	219.82	8.86	8.54	2.71
10,666.00	68.00	180.40	10,454.90	-259.23	597.95	262.57	11.08	10.64	3.40
10,714.00	72.60	180.20	10,471.08	-304.41	597.72	307.74	9.59	9.58	-0.42
10,761.00	77.30	179.50	10,483.28	-349.78	597.84	353.12	10.10	10.00	-1.49
10,809.00	81.00	179.70	10,492.31	-396.92	598.17	400.25	7.72	7.71	0.42
10,857.00	85.50	180.50	10,497.95	-444.57	598.08	447.91	9.52	9.38	1.67
10,893.00	88.70	179.80	10,499.77	-480.52	597.99	483.85	9.10	8.89	-1.94
10,922.00	89.30	179.80	10,500.28	-509.52	598.09	512.85	2.07	2.07	0.00
10,967.00	88.90	179.80	10,500.99	-554.51	598.25	557.84	0.89	-0.89	0.00
11,013.00	88.50	179.70	10,502.03	-600.50	598.45	603.83	0.90	-0.87	-0.22
11,105.00	89.20	180.20	10,503.88	-692.48	598.53	695.81	0.93	0.76	0.54
11,195.00	89.00	180.00	10,505.29	-782.47	598.37	785.80	0.31	-0.22	-0.22
11,287.00	87.80	179.30	10,507.86	-874.43	598.93	877.76	1.51	-1.30	-0.76
11,378.00	88.70	177.40	10,510.64	-965.34	601.55	968.69	2.31	0.99	-2.09
11,469.00	89.70	176.70	10,511.91	-1,056.21	606.24	1,059.58	1.34	1.10	-0.77
11,561.00	89.50	176.80	10,512.55	-1,148.06	611.45	1,151.46	0.24	-0.22	0.11
11,652.00	89.90	178.60	10,513.03	-1,238.98	615.10	1,242.40	2.03	0.44	1.98
11,743.00	89.20	178.30	10,513.74	-1,329.95	617.56	1,333.37	0.84	-0.77	-0.33
11,835.00	89.80	178.80	10,514.54	-1,421.91	619.89	1,425.35	0.85	0.65	0.54
11,930.00	90.70	180.50	10,514.13	-1,516.90	620.47	1,520.35	2.02	0.95	1.79

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Tomb Raider 1-12 Fed Com 234H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Site:	Tomb Raider 1-12 Fed Com	MD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Well:	Tomb Raider 1-12 Fed Com 234H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

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)
12,026.00	90.10	180.70	10,513.46	-1,612.90	619.47	1,616.33	0.66	-0.63	0.21
12,121.00	90.40	181.40	10,513.05	-1,707.88	617.73	1,711.30	0.80	0.32	0.74
12,217.00	90.00	181.10	10,512.71	-1,803.85	615.63	1,807.27	0.52	-0.42	-0.31
12,312.00	89.90	180.90	10,512.79	-1,898.84	613.97	1,902.24	0.24	-0.11	-0.21
12,408.00	90.90	181.20	10,512.12	-1,994.82	612.22	1,998.21	1.09	1.04	0.31
12,503.00	91.00	181.20	10,510.55	-2,089.79	610.23	2,093.16	0.11	0.11	0.00
12,598.00	90.40	180.70	10,509.39	-2,184.77	608.65	2,188.13	0.82	-0.63	-0.53
12,694.00	90.50	180.90	10,508.63	-2,280.75	607.31	2,284.11	0.23	0.10	0.21
12,789.00	89.50	178.80	10,508.63	-2,375.75	607.56	2,379.10	2.45	-1.05	-2.21
12,884.00	89.30	178.30	10,509.63	-2,470.71	609.96	2,474.08	0.57	-0.21	-0.53
12,979.00	88.20	177.20	10,511.70	-2,565.61	613.69	2,569.00	1.64	-1.16	-1.16
13,074.00	88.80	178.60	10,514.19	-2,660.51	617.17	2,663.92	1.60	0.63	1.47
13,169.00	88.20	178.10	10,516.67	-2,755.44	619.91	2,758.86	0.82	-0.63	-0.53
13,264.00	88.30	179.50	10,519.58	-2,850.37	621.89	2,853.80	1.48	0.11	1.47
13,360.00	90.10	181.10	10,520.92	-2,946.35	621.39	2,949.78	2.51	1.88	1.67
13,455.00	89.90	180.50	10,520.92	-3,041.35	620.07	3,044.76	0.67	-0.21	-0.63
13,551.00	88.30	179.50	10,522.42	-3,137.33	620.07	3,140.74	1.97	-1.67	-1.04
13,647.00	92.10	181.40	10,522.09	-3,233.30	619.31	3,236.71	4.43	3.96	1.98
13,742.00	91.70	179.50	10,518.94	-3,328.24	618.57	3,331.65	2.04	-0.42	-2.00
13,837.00	92.10	179.50	10,515.79	-3,423.19	619.39	3,426.59	0.42	0.42	0.00
13,932.00	90.90	178.60	10,513.30	-3,518.14	620.97	3,521.55	1.58	-1.26	-0.95
14,028.00	90.00	178.40	10,512.55	-3,614.10	623.48	3,617.53	0.96	-0.94	-0.21
14,124.00	88.70	178.10	10,513.64	-3,710.05	626.41	3,713.49	1.39	-1.35	-0.31
14,219.00	88.70	177.70	10,515.79	-3,804.96	629.89	3,808.42	0.42	0.00	-0.42
14,315.00	88.30	179.50	10,518.31	-3,900.90	632.24	3,904.37	1.92	-0.42	1.88
14,410.00	87.40	179.80	10,521.87	-3,995.83	632.82	3,999.30	1.00	-0.95	0.32
14,506.00	88.60	179.80	10,525.22	-4,091.76	633.15	4,095.24	1.25	1.25	0.00
14,601.00	88.30	179.80	10,527.79	-4,186.73	633.48	4,190.20	0.32	-0.32	0.00
14,696.00	90.40	180.50	10,528.87	-4,281.72	633.24	4,285.19	2.33	2.21	0.74
14,792.00	89.80	180.50	10,528.70	-4,377.71	632.40	4,381.18	0.63	-0.63	0.00
14,887.00	89.70	180.70	10,529.11	-4,472.71	631.40	4,476.16	0.24	-0.11	0.21
14,981.00	90.00	180.70	10,529.36	-4,566.70	630.26	4,570.15	0.32	0.32	0.00
15,076.00	90.00	180.70	10,529.36	-4,661.69	629.09	4,665.13	0.00	0.00	0.00
15,172.00	86.90	180.40	10,531.96	-4,757.64	628.17	4,761.07	3.24	-3.23	-0.31
15,267.00	93.90	180.50	10,531.29	-4,852.58	627.43	4,856.00	7.37	7.37	0.11
15,331.24	92.82	180.64	10,527.53	-4,916.70	626.79	4,920.13	1.70	-1.68	0.21
SL Crossing - 15331.24' MD, 10527.53' TVD									
15,362.00	92.30	180.70	10,526.16	-4,947.43	626.43	4,950.85	1.70	-1.68	0.21
15,457.00	90.90	179.10	10,523.50	-5,042.39	626.60	5,045.81	2.24	-1.47	-1.68
15,552.00	90.00	178.60	10,522.76	-5,137.36	628.51	5,140.79	1.08	-0.95	-0.53
15,647.00	88.50	178.40	10,524.00	-5,232.32	630.99	5,235.76	1.59	-1.58	-0.21
15,742.00	87.80	178.60	10,527.07	-5,327.24	633.48	5,330.69	0.77	-0.74	0.21
15,838.00	88.50	179.50	10,530.17	-5,423.17	635.07	5,426.63	1.19	0.73	0.94

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Tomb Raider 1-12 Fed Com 234H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Site:	Tomb Raider 1-12 Fed Com	MD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Well:	Tomb Raider 1-12 Fed Com 234H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

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)
15,933.00	89.20	179.70	10,532.07	-5,518.15	635.73	5,521.61	0.77	0.74	0.21
16,028.00	90.60	179.80	10,532.24	-5,613.15	636.15	5,616.61	1.48	1.47	0.11
16,124.00	89.60	179.70	10,532.07	-5,709.14	636.57	5,712.61	1.05	-1.04	-0.10
16,219.00	90.50	179.80	10,531.99	-5,804.14	636.98	5,807.61	0.95	0.95	0.11
16,315.00	91.30	179.30	10,530.48	-5,900.13	637.73	5,903.60	0.98	0.83	-0.52
16,410.00	89.10	178.60	10,530.15	-5,995.10	639.48	5,998.58	2.43	-2.32	-0.74
16,506.00	91.30	178.60	10,529.82	-6,091.07	641.82	6,094.56	2.29	2.29	0.00
16,601.00	89.20	178.40	10,529.40	-6,186.03	644.31	6,189.53	2.22	-2.21	-0.21
16,696.00	89.90	179.50	10,530.15	-6,281.01	646.05	6,284.52	1.37	0.74	1.16
16,791.00	91.20	180.00	10,529.23	-6,376.00	646.46	6,379.51	1.47	1.37	0.53
16,886.00	89.40	180.40	10,528.74	-6,470.99	646.13	6,474.50	1.94	-1.89	0.42
16,982.00	91.40	180.20	10,528.07	-6,566.99	645.63	6,570.49	2.09	2.08	-0.21
17,077.00	89.60	179.50	10,527.24	-6,661.98	645.88	6,665.48	2.03	-1.89	-0.74
17,172.00	90.90	178.60	10,526.82	-6,756.96	647.45	6,760.47	1.66	1.37	-0.95
17,268.00	93.90	179.50	10,522.80	-6,852.85	649.04	6,856.37	3.26	3.13	0.94
17,363.00	93.80	179.30	10,516.43	-6,947.63	650.04	6,951.15	0.23	-0.11	-0.21
17,457.00	93.70	179.30	10,510.28	-7,041.42	651.18	7,044.95	0.11	-0.11	0.00
17,553.00	92.00	180.50	10,505.50	-7,137.30	651.35	7,140.83	2.17	-1.77	1.25
17,648.00	90.20	180.90	10,503.68	-7,232.27	650.19	7,235.79	1.94	-1.89	0.42
17,744.00	88.60	180.70	10,504.69	-7,328.25	648.85	7,331.76	1.68	-1.67	-0.21
17,839.00	89.90	181.20	10,505.93	-7,423.23	647.27	7,426.73	1.47	1.37	0.53
17,935.00	90.00	181.60	10,506.01	-7,519.20	644.93	7,522.69	0.43	0.10	0.42
18,030.00	90.10	179.50	10,505.93	-7,614.19	644.01	7,617.67	2.21	0.11	-2.21
18,126.00	92.20	179.30	10,504.00	-7,710.16	645.02	7,713.64	2.20	2.19	-0.21
18,221.00	91.40	179.00	10,501.02	-7,805.10	646.43	7,808.59	0.90	-0.84	-0.32
18,317.00	90.60	178.60	10,499.34	-7,901.07	648.44	7,904.56	0.93	-0.83	-0.42
18,412.00	90.10	178.30	10,498.76	-7,996.03	651.01	7,999.54	0.61	-0.53	-0.32
18,507.00	89.40	179.80	10,499.18	-8,091.01	652.58	8,094.53	1.74	-0.74	1.58
18,601.00	89.90	179.80	10,499.75	-8,185.01	652.91	8,188.53	0.53	0.53	0.00
18,696.00	88.60	179.30	10,501.00	-8,280.00	653.66	8,283.52	1.47	-1.37	-0.53
18,791.00	90.40	179.70	10,501.83	-8,374.98	654.49	8,378.51	1.94	1.89	0.42
18,887.00	89.90	179.30	10,501.57	-8,470.98	655.32	8,474.51	0.67	-0.52	-0.42
18,982.00	91.10	180.20	10,500.74	-8,565.97	655.74	8,569.50	1.58	1.26	0.95
19,078.00	91.40	180.40	10,498.65	-8,661.95	655.24	8,665.47	0.38	0.31	0.21
19,173.00	91.30	180.70	10,496.41	-8,756.92	654.32	8,760.44	0.33	-0.11	0.32
19,269.00	89.60	179.50	10,495.66	-8,852.91	654.16	8,856.42	2.17	-1.77	-1.25
19,364.00	90.20	180.20	10,495.82	-8,947.91	654.41	8,951.42	0.97	0.63	0.74
19,460.00	89.20	180.40	10,496.33	-9,043.90	653.90	9,047.41	1.06	-1.04	0.21
19,555.00	89.30	180.20	10,497.57	-9,138.89	653.41	9,142.40	0.24	0.11	-0.21
19,651.00	89.80	180.90	10,498.32	-9,234.89	652.48	9,238.39	0.90	0.52	0.73
19,747.00	89.10	180.40	10,499.25	-9,330.87	651.40	9,334.37	0.90	-0.73	-0.52
19,842.00	89.10	180.20	10,500.74	-9,425.86	650.90	9,429.35	0.21	0.00	-0.21
19,938.00	88.80	179.80	10,502.50	-9,521.85	650.90	9,525.33	0.52	-0.31	-0.42
20,033.00	89.70	180.00	10,503.74	-9,616.84	651.06	9,620.32	0.97	0.95	0.21

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Tomb Raider 1-12 Fed Com 234H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Site:	Tomb Raider 1-12 Fed Com	MD Reference:	3480.0' GE + 23.5' KB @ 3503.50usft
Well:	Tomb Raider 1-12 Fed Com 234H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

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)
20,128.00	90.40	180.50	10,503.66	-9,711.83	650.65	9,715.32	0.91	0.74	0.53
20,224.00	89.20	180.50	10,503.99	-9,807.83	649.81	9,811.30	1.25	-1.25	0.00
20,279.89	88.49	180.44	10,505.12	-9,863.70	649.35	9,867.18	1.27	-1.26	-0.11
HL Crossing - 20279.89' MD, 10505.12' TVD									
20,319.00	88.00	180.40	10,506.31	-9,902.79	649.07	9,906.27	1.27	-1.26	-0.11
20,352.00	89.30	180.90	10,507.09	-9,935.78	648.69	9,939.25	4.22	3.94	1.52
20,410.00	89.30	180.90	10,507.80	-9,993.77	647.78	9,997.23	0.00	0.00	0.00
Projection									