

Devon

SURVEY REPORT

Tomb Raider 1-12 Fed 612H

Cactus 167

This survey is correct to the best of my knowledge and is supported by actual field data.

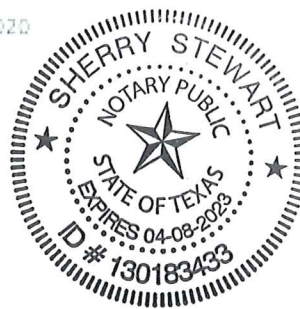
Notarized this data 6th of January, 2020

Sherry Stewart

Notary Signature

County of Midland

State of Texas



The **Ultimate Partner** In Wellbore Placement



Scientific Drilling

Devon Energy

Eddy County, NM (NAD83 NME)

Tomb Raider 1-12 Fed

612H

OH

Survey: SDI Survey #1

Standard Survey Report

14 November, 2019



Scientific Drilling

www.scientificdrilling.com



Company:	Devon Energy	Local Co-ordinate Reference:	Well 612H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 23' @ 3490.00usft (Cactus 167)
Site:	Tomb Raider 1-12 Fed	MD Reference:	KB = 23' @ 3490.00usft (Cactus 167)
Well:	612H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Project	Eddy County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site		Tomb Raider 1-12 Fed			
Site Position:		Northing:	487,968.75 usft	Latitude:	32° 20' 24.208 N
From:	Map	Easting:	727,482.68 usft	Longitude:	103° 43' 50.202 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32 °

Well	612H					
Well Position	+N/-S	0.00 usft	Northing:	487,994.95 usft	Latitude:	32° 20' 24.512 N
	+E/-W	0.00 usft	Easting:	726,674.81 usft	Longitude:	103° 43' 59.616 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,467.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/25/2019	6.80	60.07	47,989

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 (bearing)	
	0.00	0.00	0.00	182.18	

Survey Program	Date	11/11/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
207.00	21,100.00	SDI Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM	

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	
207.00	0.91	178.83	206.99	-1.64	0.03	1.64	0.44	0.44	0.00	
298.00	0.58	175.56	297.98	-2.83	0.08	2.82	0.37	-0.36	-3.59	
389.00	1.10	173.28	388.97	-4.15	0.22	4.14	0.57	0.57	-2.51	
478.00	0.79	136.91	477.96	-5.45	0.74	5.42	0.74	-0.35	-40.87	
569.00	1.14	151.07	568.95	-6.70	1.61	6.63	0.46	0.38	15.56	
647.00	1.12	157.92	646.93	-8.08	2.27	7.99	0.17	-0.03	8.78	
768.00	0.40	136.70	767.92	-9.49	3.00	9.37	0.63	-0.60	-17.54	
859.00	0.66	159.20	858.92	-10.21	3.41	10.07	0.36	0.29	24.73	
950.00	0.44	184.02	949.91	-11.05	3.57	10.90	0.35	-0.24	27.27	

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Survey									
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1,040.00	0.47	185.76	1,039.91	-11.76	3.51	11.62	0.04	0.03	1.93
1,131.00	0.30	199.88	1,130.91	-12.35	3.39	12.22	0.21	-0.19	15.52
1,222.00	0.48	213.04	1,221.91	-12.90	3.10	12.77	0.22	0.20	14.46
1,313.00	0.50	202.47	1,312.90	-13.58	2.74	13.47	0.10	0.02	-11.62
1,404.00	0.47	210.26	1,403.90	-14.27	2.40	14.17	0.08	-0.03	8.56
1,498.00	0.64	207.01	1,497.90	-15.07	1.97	14.99	0.18	0.18	-3.46
1,529.00	0.56	218.49	1,528.89	-15.35	1.80	15.27	0.46	-0.26	37.03
1,624.00	0.70	226.78	1,623.89	-16.11	1.08	16.06	0.18	0.15	8.73
1,718.00	0.89	236.37	1,717.88	-16.91	0.06	16.89	0.25	0.20	10.20
1,813.00	0.90	253.43	1,812.87	-17.53	-1.27	17.56	0.28	0.01	17.96
1,907.00	0.76	241.86	1,906.86	-18.03	-2.53	18.11	0.23	-0.15	-12.31
2,002.00	0.67	263.83	2,001.85	-18.39	-3.64	18.51	0.30	-0.09	23.13
2,096.00	1.32	272.95	2,095.84	-18.39	-5.26	18.58	0.71	0.69	9.70
2,191.00	2.05	272.67	2,190.80	-18.26	-8.05	18.55	0.77	0.77	-0.29
2,287.00	3.08	280.91	2,286.70	-17.69	-12.30	18.14	1.14	1.07	8.58
2,382.00	3.17	281.61	2,381.56	-16.68	-17.38	17.33	0.10	0.09	0.74
2,477.00	3.32	289.04	2,476.40	-15.25	-22.56	16.10	0.47	0.16	7.82
2,573.00	3.39	290.94	2,572.24	-13.33	-27.83	14.38	0.14	0.07	1.98
2,667.00	3.42	293.22	2,666.07	-11.23	-33.01	12.48	0.15	0.03	2.43
2,763.00	3.62	291.55	2,761.89	-8.99	-38.46	10.45	0.23	0.21	-1.74
2,858.00	3.57	294.60	2,856.71	-6.66	-43.94	8.32	0.21	-0.05	3.21
2,954.00	4.13	296.92	2,952.49	-3.85	-49.74	5.74	0.61	0.58	2.42
3,049.00	4.15	294.16	3,047.24	-0.89	-55.92	3.02	0.21	0.02	-2.91
3,144.00	4.00	300.82	3,142.00	2.21	-61.90	0.15	0.52	-0.16	7.01
3,239.00	4.98	297.88	3,236.71	5.84	-68.39	-3.23	1.06	1.03	-3.09
3,334.00	6.58	293.86	3,331.22	9.97	-77.02	-7.03	1.74	1.68	-4.23
3,429.00	8.20	287.17	3,425.43	14.17	-88.47	-10.79	1.93	1.71	-7.04
3,524.00	8.62	287.34	3,519.41	18.29	-101.74	-14.41	0.44	0.44	0.18
3,619.00	8.63	283.67	3,613.34	22.10	-115.46	-17.69	0.58	0.01	-3.86
3,715.00	8.76	274.84	3,708.24	24.42	-129.74	-19.46	1.40	0.14	-9.20
3,810.00	8.21	269.41	3,802.20	24.96	-143.73	-19.47	1.02	-0.58	-5.72
3,905.00	7.76	268.85	3,896.28	24.76	-156.93	-18.77	0.48	-0.47	-0.59
4,000.00	7.88	266.71	3,990.40	24.26	-169.84	-17.77	0.33	0.13	-2.25
4,095.00	8.11	264.82	4,084.47	23.28	-183.02	-16.29	0.37	0.24	-1.99
4,190.00	7.81	259.87	4,178.56	21.54	-196.05	-14.06	0.79	-0.32	-5.21
4,286.00	8.11	266.49	4,273.64	19.98	-209.23	-11.99	1.00	0.31	6.90
4,381.00	8.26	265.97	4,367.67	19.09	-222.72	-10.59	0.18	0.16	-0.55
4,476.00	7.84	266.22	4,461.73	18.18	-235.99	-9.18	0.44	-0.44	0.26
4,572.00	7.81	263.89	4,556.84	17.06	-249.01	-7.56	0.33	-0.03	-2.43
4,666.00	8.43	264.83	4,649.89	15.75	-262.23	-5.76	0.67	0.66	1.00
4,761.00	9.35	264.89	4,743.75	14.44	-276.85	-3.89	0.97	0.97	0.06
4,856.00	9.54	264.01	4,837.46	12.93	-292.36	-1.79	0.25	0.20	-0.93
4,951.00	9.57	259.44	4,931.15	10.66	-307.96	1.07	0.80	0.03	-4.81
5,046.00	8.71	259.22	5,024.94	7.87	-322.79	4.43	0.91	-0.91	-0.23

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5,142.00	9.00	257.99	5,119.80	4.95	-337.27	7.90	0.36	0.30	-1.28	
5,237.00	8.29	255.99	5,213.72	1.74	-351.18	11.63	0.81	-0.75	-2.11	
5,332.00	7.99	261.62	5,307.76	-0.88	-364.36	14.75	0.90	-0.32	5.93	
5,428.00	8.05	264.49	5,402.82	-2.49	-377.65	16.88	0.42	0.06	2.99	
5,523.00	7.58	270.33	5,496.94	-3.10	-390.54	17.97	0.97	-0.49	6.15	
5,618.00	7.75	273.37	5,591.09	-2.68	-403.20	18.04	0.46	0.18	3.20	
5,714.00	8.05	271.47	5,686.18	-2.13	-416.38	17.99	0.41	0.31	-1.98	
5,808.00	8.36	272.29	5,779.22	-1.69	-429.79	18.06	0.35	0.33	0.87	
5,903.00	7.32	270.37	5,873.33	-1.37	-442.74	18.24	1.13	-1.09	-2.02	
5,998.00	6.19	270.27	5,967.67	-1.31	-453.92	18.60	1.19	-1.19	-0.11	
6,093.00	4.55	276.66	6,062.25	-0.85	-462.78	18.48	1.83	-1.73	6.73	
6,187.00	2.69	272.97	6,156.06	-0.30	-468.69	18.15	1.99	-1.98	-3.93	
6,283.00	1.26	275.40	6,252.00	-0.09	-471.99	18.06	1.49	-1.49	2.53	
6,378.00	0.53	271.71	6,346.99	0.02	-473.47	18.01	0.77	-0.77	-3.88	
6,474.00	0.59	283.40	6,442.98	0.15	-474.39	17.92	0.13	0.06	12.18	
6,568.00	0.59	286.13	6,536.98	0.40	-475.33	17.71	0.03	0.00	2.90	
6,663.00	0.58	298.80	6,631.97	0.77	-476.22	17.37	0.14	-0.01	13.34	
6,759.00	0.45	299.22	6,727.97	1.18	-476.97	16.98	0.14	-0.14	0.44	
6,853.00	0.46	287.50	6,821.97	1.48	-477.66	16.72	0.10	0.01	-12.47	
6,948.00	0.32	295.80	6,916.96	1.71	-478.26	16.51	0.16	-0.15	8.74	
7,043.00	0.29	278.19	7,011.96	1.86	-478.74	16.38	0.10	-0.03	-18.54	
7,139.00	0.38	252.10	7,107.96	1.79	-479.28	16.46	0.18	0.09	-27.18	
7,234.00	0.48	238.19	7,202.96	1.49	-479.92	16.79	0.15	0.11	-14.64	
7,329.00	0.61	230.93	7,297.95	0.96	-480.65	17.35	0.15	0.14	-7.64	
7,424.00	0.84	219.94	7,392.95	0.11	-481.49	18.23	0.28	0.24	-11.57	
7,519.00	1.25	215.67	7,487.93	-1.27	-482.54	19.65	0.44	0.43	-4.49	
7,615.00	1.47	213.74	7,583.90	-3.14	-483.83	21.57	0.23	0.23	-2.01	
7,710.00	1.62	212.90	7,678.87	-5.28	-485.24	23.76	0.16	0.16	-0.88	
7,805.00	1.59	218.57	7,773.83	-7.44	-486.79	25.98	0.17	-0.03	5.97	
7,900.00	1.39	219.66	7,868.80	-9.36	-488.35	27.95	0.21	-0.21	1.15	
7,996.00	1.75	225.62	7,964.76	-11.28	-490.14	29.94	0.41	0.38	6.21	
8,091.00	1.35	235.50	8,059.73	-12.93	-492.10	31.66	0.50	-0.42	10.40	
8,186.00	1.01	247.49	8,154.71	-13.88	-493.79	32.68	0.44	-0.36	12.62	
8,282.00	1.00	253.11	8,250.69	-14.45	-495.38	33.31	0.10	-0.01	5.85	
8,377.00	0.92	256.52	8,345.68	-14.87	-496.91	33.79	0.10	-0.08	3.59	
8,472.00	0.81	238.86	8,440.67	-15.40	-498.23	34.36	0.30	-0.12	-18.59	
8,567.00	0.98	261.23	8,535.66	-15.87	-499.61	34.88	0.41	0.18	23.55	
8,663.00	0.77	259.01	8,631.65	-16.11	-501.05	35.19	0.22	-0.22	-2.31	
8,758.00	0.91	274.06	8,726.64	-16.18	-502.43	35.31	0.27	0.15	15.84	
8,853.00	1.48	297.16	8,821.62	-15.57	-504.27	34.76	0.77	0.60	24.32	
8,949.00	2.17	309.41	8,917.57	-13.85	-506.78	33.14	0.82	0.72	12.76	
9,044.00	2.66	314.27	9,012.48	-11.17	-509.75	30.58	0.56	0.52	5.12	
9,139.00	2.30	306.68	9,107.39	-8.49	-512.86	28.02	0.51	-0.38	-7.99	

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9,235.00	2.10	306.11	9,203.32	-6.30	-515.82	25.95	0.21	-0.21	-0.59	
9,330.00	2.43	309.39	9,298.25	-4.00	-518.78	23.76	0.37	0.35	3.45	
9,426.00	2.72	306.35	9,394.15	-1.36	-522.19	21.25	0.33	0.30	-3.17	
9,520.00	2.47	304.90	9,488.06	1.12	-525.65	18.90	0.27	-0.27	-1.54	
9,615.00	2.35	302.30	9,582.97	3.33	-528.97	16.82	0.17	-0.13	-2.74	
9,710.00	2.49	298.37	9,677.89	5.36	-532.44	14.93	0.23	0.15	-4.14	
9,805.00	1.87	287.73	9,772.82	6.81	-535.73	13.60	0.78	-0.65	-11.20	
9,899.00	0.89	276.59	9,866.79	7.36	-537.92	13.13	1.08	-1.04	-11.85	
9,993.00	0.78	272.08	9,960.78	7.47	-539.28	13.08	0.14	-0.12	-4.80	
10,088.00	0.73	291.39	10,055.77	7.71	-540.49	12.88	0.27	-0.05	20.33	
10,183.00	0.61	324.20	10,150.77	8.34	-541.35	12.28	0.42	-0.13	34.54	
10,278.00	0.64	230.45	10,245.76	8.41	-542.05	12.24	0.96	0.03	-98.68	
10,373.00	0.84	327.61	10,340.76	8.66	-542.84	12.02	1.18	0.21	102.27	
10,467.00	1.86	32.10	10,434.73	10.54	-542.39	10.13	1.79	1.09	68.61	
10,562.00	2.49	76.91	10,529.67	12.31	-539.56	8.25	1.85	0.66	47.17	
10,658.00	3.11	49.79	10,625.56	14.46	-535.54	5.94	1.50	0.65	-28.25	
10,752.00	3.33	301.03	10,719.48	17.52	-535.94	2.90	5.57	0.23	-115.70	
10,847.00	3.25	357.59	10,814.34	21.63	-538.42	-1.11	3.28	-0.08	59.54	
10,983.00	1.02	338.20	10,950.24	26.61	-539.03	-6.06	1.70	-1.64	-14.26	
11,079.00	0.45	328.13	11,046.23	27.72	-539.54	-7.15	0.61	-0.59	-10.49	
11,174.00	0.71	341.90	11,141.23	28.60	-539.92	-8.02	0.31	0.27	14.49	
11,269.00	7.87	172.96	11,235.95	22.69	-539.31	-2.14	9.02	7.54	-177.83	
11,365.00	17.68	175.69	11,329.46	1.58	-537.40	18.89	10.24	10.22	2.84	
11,412.00	24.46	174.38	11,373.30	-15.24	-535.91	35.64	14.46	14.43	-2.79	
11,460.00	30.15	172.03	11,415.93	-37.08	-533.26	57.37	12.06	11.85	-4.90	
11,507.00	34.14	172.37	11,455.72	-61.85	-529.88	81.99	8.50	8.49	0.72	
11,556.00	38.30	176.43	11,495.25	-90.65	-527.10	110.66	9.80	8.49	8.29	
11,603.00	43.90	177.17	11,530.65	-121.49	-525.39	141.41	11.96	11.91	1.57	
11,651.00	48.86	175.45	11,563.76	-156.15	-523.13	175.96	10.65	10.33	-3.58	
11,698.00	51.22	173.63	11,593.94	-192.01	-519.70	211.66	5.83	5.02	-3.87	
11,746.00	55.58	172.53	11,622.55	-230.25	-515.04	249.70	9.27	9.08	-2.29	
11,793.00	60.06	171.61	11,647.58	-269.64	-509.55	288.85	9.67	9.53	-1.96	
11,842.00	62.10	171.66	11,671.27	-312.07	-503.31	331.01	4.16	4.16	0.10	
11,889.00	62.52	170.90	11,693.11	-353.21	-497.00	371.88	1.69	0.89	-1.62	
11,937.00	66.79	172.93	11,713.66	-396.14	-490.91	414.55	9.68	8.90	4.23	
11,984.00	72.46	177.28	11,730.02	-440.01	-487.19	458.25	14.86	12.06	9.26	
12,032.00	76.75	178.79	11,742.76	-486.25	-485.61	504.39	9.44	8.94	3.15	
12,079.00	77.96	177.47	11,753.05	-532.09	-484.11	550.14	3.76	2.57	-2.81	
12,128.00	78.62	175.65	11,763.00	-579.98	-481.23	597.88	3.88	1.35	-3.71	
12,175.00	83.37	174.84	11,770.35	-626.22	-477.38	643.95	10.25	10.11	-1.72	
12,223.00	88.42	174.89	11,773.79	-673.89	-473.10	691.42	10.52	10.52	0.10	
12,318.00	90.64	175.76	11,774.57	-768.57	-465.36	785.73	2.51	2.34	0.92	
12,414.00	90.13	175.35	11,773.92	-864.28	-457.92	881.09	0.68	-0.53	-0.43	

Company:	Devon Energy	Local Co-ordinate Reference:	Well 612H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 23' @ 3490.00usft (Cactus 167)
Site:	Tomb Raider 1-12 Fed	MD Reference:	KB = 23' @ 3490.00usft (Cactus 167)
Well:	612H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

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)
12,509.00	90.81	178.61	11,773.14	-959.13	-452.91	975.68	3.51	0.72	3.43
12,605.00	90.37	178.41	11,772.15	-1,055.09	-450.42	1,071.48	0.50	-0.46	-0.21
12,700.00	91.88	179.86	11,770.29	-1,150.06	-448.98	1,166.32	2.20	1.59	1.53
12,796.00	91.38	179.10	11,767.56	-1,246.01	-448.11	1,262.17	0.95	-0.52	-0.79
12,891.00	91.17	178.59	11,765.44	-1,340.97	-446.20	1,356.99	0.58	-0.22	-0.54
12,987.00	89.87	180.55	11,764.57	-1,436.95	-445.48	1,452.88	2.45	-1.35	2.04
13,082.00	89.23	180.09	11,765.32	-1,531.95	-446.01	1,547.82	0.83	-0.67	-0.48
13,177.00	89.56	180.42	11,766.32	-1,626.94	-446.43	1,642.77	0.49	0.35	0.35
13,273.00	89.63	180.09	11,767.00	-1,722.94	-446.86	1,738.71	0.35	0.07	-0.34
13,368.00	88.56	179.82	11,768.50	-1,817.93	-446.78	1,833.62	1.16	-1.13	-0.28
13,464.00	89.90	180.92	11,769.79	-1,913.91	-447.40	1,929.56	1.81	1.40	1.15
13,559.00	88.59	179.60	11,771.04	-2,008.90	-447.83	2,024.50	1.96	-1.38	-1.39
13,654.00	88.22	179.73	11,773.69	-2,103.86	-447.28	2,119.37	0.41	-0.39	0.14
13,750.00	90.54	179.39	11,774.72	-2,199.84	-446.54	2,215.26	2.44	2.42	-0.35
13,845.00	90.23	178.28	11,774.09	-2,294.82	-444.61	2,310.09	1.21	-0.33	-1.17
13,940.00	88.69	177.46	11,774.98	-2,389.75	-441.08	2,404.81	1.84	-1.62	-0.86
14,035.00	91.44	181.26	11,774.87	-2,484.72	-440.02	2,499.67	4.94	2.89	4.00
14,159.00	92.68	182.35	11,770.42	-2,608.57	-443.92	2,623.58	1.33	1.00	0.88
14,254.00	90.10	180.88	11,768.11	-2,703.49	-446.60	2,718.54	3.13	-2.72	-1.55
14,349.00	89.83	180.44	11,768.17	-2,798.49	-447.69	2,813.51	0.54	-0.28	-0.46
14,445.00	90.00	180.10	11,768.31	-2,894.49	-448.14	2,909.45	0.40	0.18	-0.35
14,540.00	89.10	180.09	11,769.06	-2,989.48	-448.30	3,004.39	0.95	-0.95	-0.01
14,635.00	89.26	179.82	11,770.42	-3,084.47	-448.23	3,099.30	0.33	0.17	-0.28
14,731.00	91.27	179.21	11,769.97	-3,180.46	-447.41	3,195.19	2.19	2.09	-0.64
14,826.00	90.50	179.12	11,768.51	-3,275.44	-446.03	3,290.05	0.82	-0.81	-0.09
14,922.00	90.27	179.65	11,767.86	-3,371.43	-445.00	3,385.93	0.60	-0.24	0.55
15,017.00	91.17	178.52	11,766.67	-3,466.41	-443.48	3,480.78	1.52	0.95	-1.19
15,112.00	91.11	178.44	11,764.78	-3,561.36	-440.96	3,575.57	0.11	-0.06	-0.08
15,208.00	90.30	178.90	11,763.60	-3,657.32	-438.73	3,671.38	0.97	-0.84	0.48
15,303.00	89.80	178.85	11,763.51	-3,752.30	-436.87	3,766.22	0.53	-0.53	-0.05
15,398.00	91.98	178.86	11,762.04	-3,847.27	-434.97	3,861.04	2.29	2.29	0.01
15,493.00	90.81	178.10	11,759.73	-3,942.20	-432.45	3,955.81	1.47	-1.23	-0.80
15,588.00	91.68	178.29	11,757.66	-4,037.13	-429.46	4,050.56	0.94	0.92	0.20
15,684.00	91.78	178.60	11,754.76	-4,133.05	-426.86	4,146.31	0.34	0.10	0.32
15,779.00	90.33	177.35	11,753.01	-4,227.97	-423.50	4,241.04	2.02	-1.53	-1.32
15,874.00	89.53	177.05	11,753.13	-4,322.86	-418.86	4,335.68	0.90	-0.84	-0.32
15,970.00	89.23	177.14	11,754.17	-4,418.73	-413.99	4,431.29	0.33	-0.31	0.09
16,065.00	90.33	179.86	11,754.53	-4,513.69	-411.51	4,526.09	3.09	1.16	2.86
16,160.00	90.50	180.37	11,753.85	-4,608.68	-411.70	4,621.02	0.57	0.18	0.54
16,255.00	91.17	180.68	11,752.46	-4,703.67	-412.57	4,715.97	0.78	0.71	0.33
16,351.00	88.76	179.19	11,752.52	-4,799.66	-412.46	4,811.89	2.95	-2.51	-1.55
16,446.00	87.89	178.93	11,755.30	-4,894.61	-410.90	4,906.70	0.96	-0.92	-0.27
16,541.00	90.07	183.23	11,756.99	-4,989.55	-412.69	5,001.64	5.07	2.29	4.53
16,637.00	90.40	183.54	11,756.59	-5,085.38	-418.36	5,097.62	0.47	0.34	0.32

Company:	Devon Energy	Local Co-ordinate Reference:	Well 612H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 23' @ 3490.00usft (Cactus 167)
Site:	Tomb Raider 1-12 Fed	MD Reference:	KB = 23' @ 3490.00usft (Cactus 167)
Well:	612H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

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)
16,732.00	90.03	184.00	11,756.24	-5,180.17	-424.61	5,192.58	0.62	-0.39	0.48
16,828.00	89.46	183.64	11,756.67	-5,275.96	-431.00	5,288.54	0.70	-0.59	-0.38
16,923.00	87.85	182.87	11,758.90	-5,370.77	-436.40	5,383.50	1.88	-1.69	-0.81
17,018.00	86.42	181.08	11,763.64	-5,465.59	-439.67	5,478.37	2.41	-1.51	-1.88
17,114.00	91.21	180.92	11,765.63	-5,561.53	-441.34	5,574.30	4.99	4.99	-0.17
17,209.00	90.27	181.02	11,764.40	-5,656.50	-442.95	5,669.27	1.00	-0.99	0.11
17,305.00	88.63	180.31	11,765.32	-5,752.49	-444.06	5,765.23	1.86	-1.71	-0.74
17,400.00	90.77	181.28	11,765.82	-5,847.47	-445.38	5,860.19	2.47	2.25	1.02
17,496.00	90.03	181.09	11,765.15	-5,943.45	-447.37	5,956.18	0.80	-0.77	-0.20
17,591.00	91.71	179.49	11,763.71	-6,038.43	-447.85	6,051.11	2.44	1.77	-1.68
17,686.00	90.70	179.88	11,761.71	-6,133.41	-447.33	6,145.99	1.14	-1.06	0.41
17,781.00	90.40	180.36	11,760.80	-6,228.40	-447.52	6,240.93	0.60	-0.32	0.51
17,877.00	89.77	180.26	11,760.66	-6,324.40	-448.04	6,336.88	0.66	-0.66	-0.10
17,971.00	90.97	179.68	11,760.05	-6,418.40	-447.99	6,430.80	1.42	1.28	-0.62
18,067.00	91.07	180.27	11,758.34	-6,514.38	-447.95	6,526.71	0.62	0.10	0.61
18,161.00	90.94	178.50	11,756.69	-6,608.36	-446.94	6,620.58	1.89	-0.14	-1.88
18,257.00	90.34	178.17	11,755.62	-6,704.31	-444.15	6,716.36	0.71	-0.63	-0.34
18,352.00	89.56	177.96	11,755.70	-6,799.25	-440.95	6,811.12	0.85	-0.82	-0.22
18,447.00	88.93	177.48	11,756.95	-6,894.17	-437.17	6,905.82	0.83	-0.66	-0.51
18,541.00	90.30	177.45	11,757.58	-6,988.07	-433.01	6,999.50	1.46	1.46	-0.03
18,637.00	90.30	177.55	11,757.08	-7,083.98	-428.82	7,095.17	0.10	0.00	0.10
18,732.00	89.23	177.28	11,757.47	-7,178.88	-424.54	7,189.84	1.16	-1.13	-0.28
18,826.00	90.60	178.04	11,757.61	-7,272.80	-420.70	7,283.55	1.67	1.46	0.81
18,920.00	91.71	179.15	11,755.72	-7,366.75	-418.40	7,377.34	1.67	1.18	1.18
19,015.00	91.84	178.52	11,752.77	-7,461.68	-416.47	7,472.13	0.68	0.14	-0.66
19,110.00	91.74	178.03	11,749.81	-7,556.60	-413.61	7,566.87	0.53	-0.11	-0.52
19,205.00	91.31	177.73	11,747.28	-7,651.50	-410.09	7,661.56	0.55	-0.45	-0.32
19,298.00	90.77	179.96	11,745.59	-7,744.46	-408.22	7,754.38	2.47	-0.58	2.40
19,392.00	91.17	179.29	11,744.00	-7,838.44	-407.61	7,848.28	0.83	0.43	-0.71
19,487.00	88.93	177.95	11,743.92	-7,933.40	-405.32	7,943.08	2.75	-2.36	-1.41
19,582.00	88.49	180.29	11,746.05	-8,028.36	-403.86	8,037.92	2.51	-0.46	2.46
19,677.00	88.93	180.28	11,748.19	-8,123.34	-404.33	8,132.84	0.46	0.46	-0.01
19,772.00	88.86	180.40	11,750.03	-8,218.32	-404.89	8,227.77	0.15	-0.07	0.13
19,866.00	88.89	180.61	11,751.87	-8,312.29	-405.72	8,321.72	0.23	0.03	0.22
19,961.00	86.64	179.92	11,755.58	-8,407.21	-406.16	8,416.58	2.48	-2.37	-0.73
20,056.00	87.02	180.39	11,760.83	-8,502.07	-406.42	8,511.38	0.64	0.40	0.49
20,151.00	87.62	180.62	11,765.27	-8,596.96	-407.26	8,606.23	0.68	0.63	0.24
20,246.00	89.03	181.14	11,768.05	-8,691.91	-408.71	8,701.17	1.58	1.48	0.55
20,341.00	92.18	181.75	11,767.04	-8,786.86	-411.11	8,796.14	3.38	3.32	0.64
20,436.00	91.17	181.06	11,764.27	-8,881.79	-413.44	8,891.09	1.29	-1.06	-0.73
20,531.00	91.01	181.13	11,762.46	-8,976.75	-415.25	8,986.06	0.18	-0.17	0.07
20,626.00	89.63	180.78	11,761.93	-9,071.74	-416.84	9,081.03	1.50	-1.45	-0.37
20,722.00	92.38	182.35	11,760.25	-9,167.67	-419.46	9,177.00	3.30	2.86	1.64

Company:	Devon Energy	Local Co-ordinate Reference:	Well 612H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB = 23' @ 3490.00usft (Cactus 167)
Site:	Tomb Raider 1-12 Fed	MD Reference:	KB = 23' @ 3490.00usft (Cactus 167)
Well:	612H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

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)	
20,817.00	91.77	182.21	11,756.81	-9,262.53	-423.23	9,271.93	0.66	-0.64	-0.15	
20,910.00	89.66	181.12	11,755.65	-9,355.48	-425.93	9,364.92	2.55	-2.27	-1.17	
21,005.00	90.13	179.96	11,755.82	-9,450.48	-426.83	9,459.88	1.32	0.49	-1.22	
21,100.00	91.54	180.88	11,754.44	-9,545.46	-427.53	9,554.82	1.77	1.48	0.97	
21,196.00	91.44	178.84	11,751.94	-9,641.42	-427.29	9,650.70	2.13	-0.10	-2.13	
21,291.00	91.78	178.11	11,749.27	-9,736.35	-424.76	9,745.46	0.85	0.36	-0.77	
21,386.00	92.08	178.30	11,746.07	-9,831.25	-421.79	9,840.18	0.37	0.32	0.20	
21,472.00	91.97	178.45	11,743.03	-9,917.16	-419.35	9,925.94	0.22	-0.13	0.17	
FINAL MWD Survey (21472.00' MD)										
21,525.00	91.97	178.45	11,741.21	-9,970.11	-417.92	9,978.79	0.00	0.00	0.00	
FINAL Proj. to Bit (21525.00' MD) - BHL[TR1-12\612H]										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
21,472.00	11,743.03	-9,917.16	-419.35	FINAL MWD Survey (21472.00' MD)	
21,525.00	11,741.21	-9,970.11	-417.92	FINAL Proj. to Bit (21525.00' MD)	

Checked By: _____	Approved By: _____	Date: _____
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