30-015-43864

Energy Services

XTO Energy

Nash Unit 55H

Eddy County, New Mexico

Noram 25

Prepared by:

Vanessa Scott

XTO Energy

Belmont County, Ohio (NAD 27)
Kurth Unit D
5H

Wellbore #1

Design: Surveys

Standard Survey Report

27 December, 2016

MS Energy Services.
WWW.MSENERGYSERVICES.COM

Company:	XTO Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Belmont County, Ohio (NAD 27)	**TVD Reference:**	WELL @ 1109.00usft (Nomac 79)
Site:	Kurth Unit D	**MD Reference:**	WELL @ 1109.00usft (Nomac 79)
Well:	5H	**North Reference:**	True
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys	**Database:**	Conroe Server

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)
750.00	1.52	351.43	749.94	6.48	-1.59	-6.65	0.30	-0.04	-11.06
800.00	1.79	352.58	799.92	7.91	-1.79	-8.07	0.54	0.54	2.30
850.00	1.70	347.53	849.90	9.41	-2.05	-9.57	0.36	-0.18	-10.10
900.00	1.64	348.69	899.88	10.83	-2.35	-11.02	0.14	-0.12	2.32
950.00	1.58	332.32	949.86	12.15	-2.81	-12.41	0.92	-0.12	-32.74
1,000.00	1.66	320.10	999.84	13.31	-3.59	-13.76	0.71	0.16	-24.44
1,050.00	1.38	306.40	1,049.82	14.26	-4.54	-14.93	0.91	-0.56	-27.40
1,100.00	1.36	304.78	1,099.80	14.92	-5.51	-15.90	0.09	-0.04	-3.24
1,150.00	1.30	288.52	1,149.79	15.44	-6.54	-16.72	0.76	-0.12	-32.52
1,200.00	1.37	274.86	1,199.78	15.67	-7.67	-17.30	0.65	0.14	-27.32
1,250.00	1.10	297.83	1,249.77	15.95	-8.69	-17.89	1.12	-0.54	45.94
1,300.00	1.34	312.36	1,299.76	16.56	-9.55	-18.75	0.78	0.48	29.06
1,350.00	1.44	330.20	1,349.74	17.50	-10.29	-19.88	0.88	0.20	35.68
1,400.00	1.64	334.11	1,399.72	18.69	-10.92	-21.20	0.45	0.40	7.82
1,450.00	1.82	352.49	1,449.70	20.12	-11.33	-22.69	1.16	0.36	36.76
1,500.00	2.27	354.89	1,499.67	21.90	-11.53	-24.43	0.92	0.90	4.80
1,550.00	2.38	357.31	1,549.63	23.92	-11.66	-26.39	0.29	0.22	4.84
1,600.00	2.56	352.62	1,599.58	26.06	-11.86	-28.49	0.54	0.36	-9.38
1,650.00	2.96	340.66	1,649.52	28.39	-12.43	-30.87	1.40	0.80	-23.92
1,700.00	2.95	335.09	1,699.46	30.77	-13.40	-33.44	0.57	-0.02	-11.14
1,750.00	3.18	337.14	1,749.39	33.22	-14.48	-36.11	0.51	0.46	4.10
1,800.00	3.46	334.35	1,799.30	35.86	-15.67	-38.99	0.65	0.56	-5.58
1,850.00	3.70	333.15	1,849.20	38.66	-17.05	-42.08	0.50	0.48	-2.40
1,900.00	4.15	330.30	1,899.09	41.67	-18.68	-45.45	0.98	0.90	-5.70
1,950.00	4.00	331.25	1,948.96	44.77	-20.41	-48.95	0.33	-0.30	1.90
2,000.00	4.38	328.28	1,998.83	47.92	-22.25	-52.52	0.87	0.76	-5.94
2,040.00	4.38	325.80	2,038.71	50.48	-23.91	-55.48	0.47	0.00	-6.20
Tie-in to Gyrodata Gyro - 2040.00' MD									
2,126.00	4.55	322.43	2,124.45	55.90	-27.84	-61.87	0.36	0.20	-3.92
2,297.00	4.58	307.03	2,294.91	65.39	-37.43	-73.93	0.71	0.02	-9.01
2,392.00	3.58	296.69	2,389.67	69.01	-43.11	-79.18	1.30	-1.05	-10.88
2,489.00	3.11	285.25	2,486.51	71.06	-48.35	-82.80	0.84	-0.48	-11.79
2,583.00	1.95	266.85	2,580.42	71.64	-52.41	-84.65	1.49	-1.23	-19.57
2,677.00	1.23	226.62	2,674.38	70.86	-54.74	-84.66	1.37	-0.77	-42.80
2,772.00	1.42	131.61	2,769.37	69.38	-54.60	-83.21	2.06	0.20	-100.01
2,867.00	3.70	93.23	2,864.27	68.16	-50.68	-80.80	2.77	2.40	-35.14
2,962.00	4.64	92.76	2,959.02	67.54	-43.81	-78.01	1.07	0.99	-5.76
3,056.00	5.71	73.93	3,052.64	68.65	-35.52	-76.41	2.12	1.14	-20.03
3,151.00	6.76	61.44	3,147.08	72.63	-26.07	-77.15	1.80	1.11	-13.15
3,246.00	7.96	50.31	3,241.30	79.50	-16.09	-80.47	1.96	1.26	-11.72
3,341.00	9.70	42.33	3,335.17	89.62	-5.64	-86.71	2.24	1.83	-8.40
3,435.00	9.51	35.30	3,427.86	101.81	4.18	-95.12	1.26	-0.20	-7.48
3,530.00	9.74	30.70	3,521.52	115.13	12.82	-104.97	0.84	0.24	-4.84

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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)
7,705.00	12.15	42.90	7,607.06	715.04	576.45	-492.88	1.72	1.62	2.85
7,799.00	15.68	51.00	7,698.30	730.28	593.06	-502.01	4.28	3.76	8.62
7,895.00	15.29	53.03	7,790.82	746.06	613.25	-510.49	0.70	-0.41	2.11
7,989.00	14.47	51.63	7,881.66	760.80	632.36	-518.34	0.95	-0.87	-1.49
8,084.00	14.40	48.53	7,973.66	775.99	650.52	-526.92	0.82	-0.07	-3.26
8,178.00	14.56	47.96	8,064.68	791.65	668.05	-536.13	0.23	0.17	-0.61
8,273.00	13.59	46.89	8,156.83	807.27	685.07	-545.49	1.06	-1.02	-1.13
8,368.00	12.72	42.60	8,249.33	822.60	700.30	-555.13	1.38	-0.92	-4.52
8,463.00	11.71	44.60	8,342.18	837.16	714.15	-564.50	1.15	-1.06	2.11
8,496.00	11.39	45.99	8,374.51	841.81	718.84	-567.40	1.29	-0.97	4.21
8,568.00	11.39	45.99	8,445.10	851.69	729.07	-573.48	0.00	0.00	0.00

Projection to TD - 8568.00' MD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,040.00	2,038.71	50.48	-23.91	Tie-in to Gyrodata Gyro - 2040.00' MD
8,568.00	8,445.10	851.69	729.07	Projection to TD - 8568.00' MD