

DEC 10 2015

30-025-42710

RECEIVED

XTO Energy Inc.

Lea County, NM (NAD27)

Sec 24, TWN 19-S, RGE 34-E

Perla Negra Federal Com #3H

Original Wellbore

Design: Original Wellbore

Standard Survey Report

15 September, 2015

gyro/data
Precision Wellbore Placement

~~DEC 15 2015~~

DEC 21 2015



Company: XTO Energy Inc.
Field: Lea County, NM (NAD27)
Location: Sec 24, T2N 19-S, R2E 34-E
Well: Perla Negra Federal Com #3H
Original Wellbore
Plan: Design #2 (Perla Negra Federal Com #3H/Original Wellbore)
RKB @ 3811.0ft
Ground Level: 3784.0

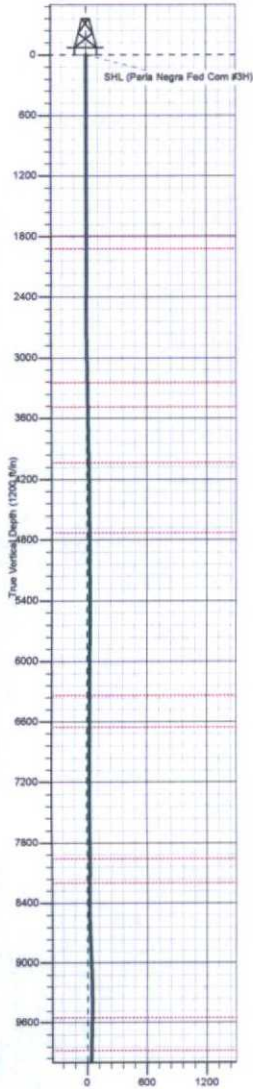


WELL DETAILS: Perla Negra Federal Com #3H

Ground Level: 3784.0
RKB @ 3811.0ft
+N-S 0.0 +E-W 0.0 Northing 182015.71 Easting 229539.70 32° 38' 20.443 N 103° 30' 40.271 W

SECTION DETAILS

Sec	MD	Inc	Adj	TVD	+N-S	+E-W	Diag	T-Face	V-Sect	Annotation
1	10270.0	1.73	213.42	10268.5	34.9	-9.8	0.00	0.00	34.8	Tie-In to Gyro Survey @ 10270MD
2	10312.1	1.73	213.42	10310.6	33.8	-10.5	0.00	0.00	33.7	KOP 10°/100' @ 10312MD
3	10885.0	83.85	3.08	10787.7	298.3	-2.5	10.01	150.28	298.2	Build and Turn 10°/100' @ 10885MD
4	11236.5	90.96	0.78	10898.0	616.0	8.4	10.01	-3.78	616.1	Land Curve @ 11236MD
5	15377.2	90.96	0.78	10826.5	4885.7	84.7	0.00	0.00	4756.2	
6	15507.2	90.96	0.78	10826.5	4885.7	98.5	0.00	0.00	4886.2	Well TD @ 15507MD



PROJECT DETAILS: Lea County, NM (NAD27)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1983 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level



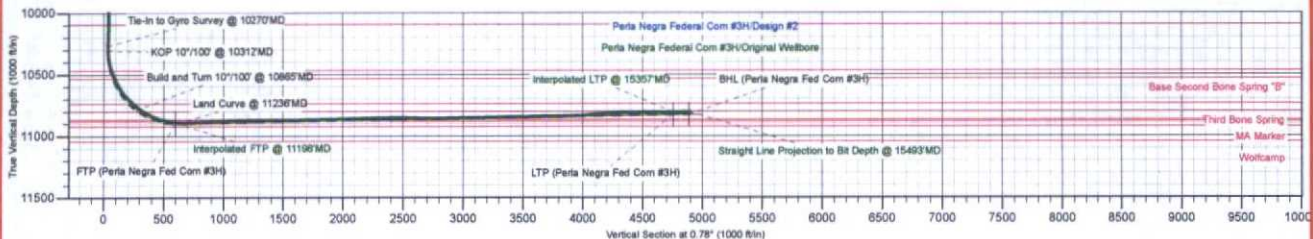
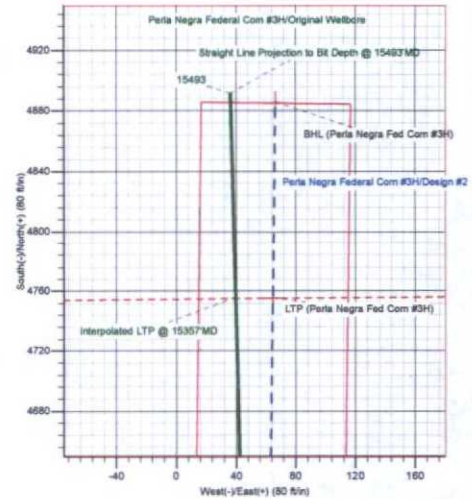
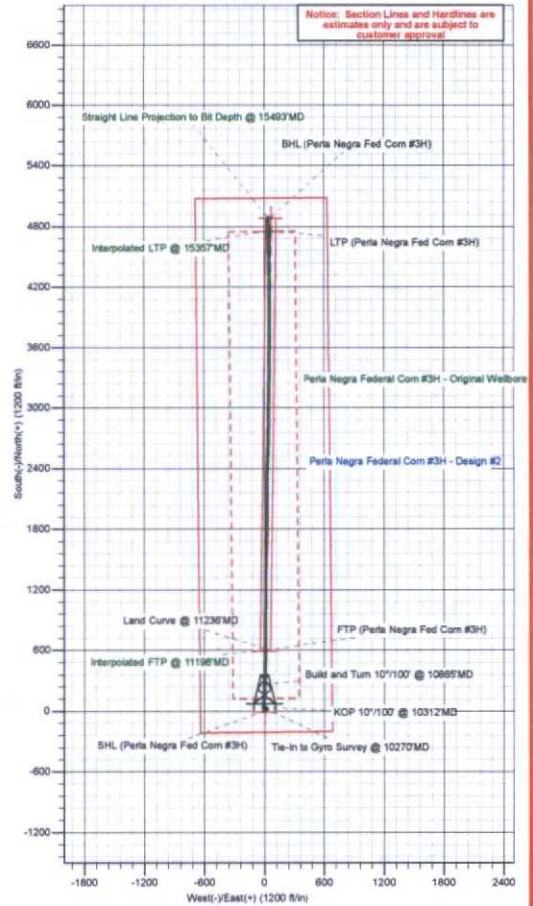
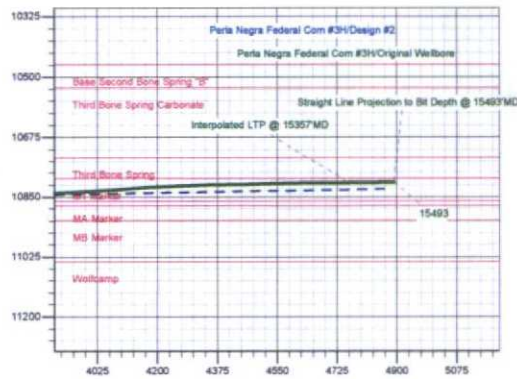
Azimuth to Grid North
True North: 0.48°
Magnetic North: 6.71°
Magnetic Field
Strength: 46380.0nT
Dip Angle: 60.48°
Date: 201508/11
Model: IGRF2015

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1793.0	1793.0	Rustler
1851.0	1851.0	Tan Salt
3246.0	3246.2	Base Salt
3486.0	3486.2	Valle
4034.0	4034.3	Seven Rivers
4726.0	4726.3	Queen
6334.0	6334.4	Delaware
6651.0	6651.4	Brushy Canyon
7954.0	7954.8	Basal Brushy Canyon
8192.0	8192.6	Bone Spring
9546.0	9547.3	First Bone Spring
9873.0	9874.5	Second Bone Spring
10069.0	10069.5	Base Second Bone Spring
10482.0	10484.9	Third Bone Spring
10529.0	10535.2	Third Bone Spring Carbonate
10732.0	10779.2	Third Bone Spring
10795.0	10877.7	M1 Marker
10861.0	11019.5	MA Marker
10874.0	11060.1	MA2 Marker

ANNOTATIONS

TVD	MD	Annotation
10268.5	10270.0	Tie-In to Gyro Survey @ 10270MD
10310.6	10312.1	KOP 10°/100' @ 10312MD
10787.7	10885.0	Build and Turn 10°/100' @ 10885MD
10898.0	11236.4	Land Curve @ 11236MD
10826.5	15507.2	Well TD @ 15507MD



DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	North	East	Latitude	Longitude	Shape
SHL (Perla Negra Fed Com #3H)	0.0	0.0	0.0	182015.71	229539.70	32° 38' 20.443 N	103° 30' 40.271 W	Point
HL (Perla Negra Fed Com #3H)	10826.5	4885.7	84.7	183954.87	229559.97	32° 39' 8.780 N	103° 30' 38.051 W	Point
BHL (Perla Negra Fed Com #3H)	10826.5	4885.7	84.7	183954.87	229559.97	32° 39' 8.780 N	103° 30' 38.051 W	Point
LTP (Perla Negra Fed Com #3H)	10826.5	4755.8	84.7	183465.28	229559.42	32° 39' 7.466 N	103° 30' 38.044 W	Point
FTP (Perla Negra Fed Com #3H)	10868.0	599.9	8.2	182168.58	229542.20	32° 38' 26.378 N	103° 30' 40.121 W	Point

Gyrodata Survey Report



Company:	XTO Energy Inc.	Local Co-ordinate Reference:	Well Perla Negra Federal Com #3H
Project:	Lea County, NM (NAD27)	TVD Reference:	RKB @ 3811.0ft
Site:	Sec 24, TWN 19-S, RGE 34-E	MD Reference:	RKB @ 3811.0ft
Well:	Perla Negra Federal Com #3H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	Database:	EDM 5000.1 Single User Db

Project	Lea County, NM (NAD27)		
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	Sec 24, TWN 19-S, RGE 34-E		
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Site Position:		Northing:	181,868.55 m	Latitude:	32° 38' 15.549 N
From:	Map	Easting:	230,002.44 m	Longitude:	103° 30' 22.562 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.45 °

Well	Perla Negra Federal Com #3H				
Well Position	+N/-S	0.0 ft	Northing:	182,015.71 m	Latitude: 32° 38' 20.443 N
	+E/-W	0.0 ft	Easting:	229,539.70 m	Longitude: 103° 30' 40.271 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level: 3,784.0 ft

Wellbore	Original Wellbore				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2015/08/11	7.16	60.48	48,380

Design	Original Wellbore				
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.78

Survey Program		Date	2015/09/15		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.0	10,270.0	Survey #1 (Original Wellbore)	GYRO-NS-CT	XYZ Accel with XY Static and Continuous Gyro	
10,332.0	15,493.0	MWD Survey #1 (Original Wellbore)	MWD	MWD - Standard	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.09	89.68	100.0	0.0	0.1	0.0	0.09	0.09	0.00
200.0	0.15	103.43	200.0	0.0	0.3	0.0	0.07	0.06	13.75
300.0	0.16	104.66	300.0	-0.1	0.5	-0.1	0.01	0.01	1.23
400.0	0.15	104.17	400.0	-0.2	0.8	-0.2	0.01	-0.01	-0.49
500.0	0.19	93.51	500.0	-0.2	1.1	-0.2	0.05	0.04	-10.66
600.0	0.19	91.63	600.0	-0.2	1.4	-0.2	0.01	0.00	-1.88
700.0	0.17	66.51	700.0	-0.2	1.7	-0.1	0.08	-0.02	-25.12
800.0	0.18	60.13	800.0	0.0	2.0	0.0	0.02	0.01	-6.38
900.0	0.17	58.54	900.0	0.1	2.3	0.2	0.01	-0.01	-1.59

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Well:	Perla Negra Federal Com #3H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,000.0	0.17	60.14	1,000.0	0.3	2.5	0.3	0.00	0.00	1.60
1,100.0	0.17	63.26	1,100.0	0.4	2.8	0.5	0.01	0.00	3.12
1,200.0	0.06	130.76	1,200.0	0.5	3.0	0.5	0.16	-0.11	67.50
1,300.0	0.04	131.22	1,300.0	0.4	3.0	0.4	0.02	-0.02	0.46
1,400.0	0.04	142.44	1,400.0	0.3	3.1	0.4	0.01	0.00	11.22
1,500.0	0.04	142.23	1,500.0	0.3	3.1	0.3	0.00	0.00	-0.21
1,600.0	0.12	178.84	1,600.0	0.2	3.1	0.2	0.09	0.08	36.61
1,700.0	0.17	220.29	1,700.0	-0.1	3.0	0.0	0.11	0.05	41.45
1,800.0	0.16	219.37	1,800.0	-0.3	2.9	-0.2	0.01	-0.01	-0.92
1,900.0	0.15	231.64	1,900.0	-0.5	2.7	-0.4	0.03	-0.01	12.27
2,000.0	0.19	122.09	2,000.0	-0.6	2.7	-0.6	0.28	0.04	-109.55
2,100.0	0.23	112.00	2,100.0	-0.8	3.0	-0.8	0.05	0.04	-10.09
2,200.0	0.22	83.59	2,200.0	-0.9	3.4	-0.8	0.11	-0.01	-28.41
2,300.0	0.20	83.59	2,300.0	-0.8	3.8	-0.8	0.02	-0.02	0.00
2,400.0	0.19	80.36	2,400.0	-0.8	4.1	-0.7	0.01	-0.01	-3.23
2,500.0	0.32	33.30	2,500.0	-0.5	4.4	-0.4	0.24	0.13	-47.06
2,600.0	0.47	21.58	2,600.0	0.1	4.7	0.2	0.17	0.15	-11.72
2,700.0	0.61	27.24	2,700.0	1.0	5.1	1.0	0.15	0.14	5.66
2,800.0	0.92	36.29	2,800.0	2.1	5.8	2.2	0.33	0.31	9.05
2,900.0	1.21	40.89	2,900.0	3.5	7.0	3.6	0.30	0.29	4.60
3,000.0	1.42	49.07	2,999.9	5.1	8.6	5.3	0.28	0.21	8.18
3,100.0	1.53	52.77	3,099.9	6.8	10.6	6.9	0.15	0.11	3.70
3,200.0	1.64	53.76	3,199.9	8.4	12.9	8.6	0.11	0.11	0.99
3,300.0	1.60	51.43	3,299.8	10.1	15.1	10.3	0.08	-0.04	-2.33
3,400.0	1.36	46.11	3,399.8	11.8	17.0	12.1	0.28	-0.24	-5.32
3,500.0	1.20	41.58	3,499.8	13.4	18.6	13.7	0.19	-0.16	-4.53
3,600.0	1.04	34.49	3,599.7	15.0	19.8	15.2	0.21	-0.16	-7.09
3,700.0	0.93	28.15	3,699.7	16.4	20.7	16.7	0.15	-0.11	-6.34
3,800.0	0.87	26.02	3,799.7	17.8	21.4	18.1	0.07	-0.06	-2.13
3,900.0	0.86	24.49	3,899.7	19.2	22.1	19.5	0.03	-0.01	-1.53
4,000.0	0.84	23.76	3,999.7	20.5	22.7	20.8	0.02	-0.02	-0.73
4,100.0	0.68	17.35	4,099.7	21.8	23.1	22.1	0.18	-0.16	-6.41
4,200.0	0.60	12.77	4,199.7	22.9	23.4	23.2	0.09	-0.08	-4.58
4,300.0	0.46	4.50	4,299.7	23.8	23.6	24.1	0.16	-0.14	-8.27
4,400.0	0.39	354.82	4,399.7	24.5	23.6	24.8	0.10	-0.07	-9.68
4,500.0	0.34	335.08	4,499.7	25.1	23.4	25.4	0.13	-0.05	-19.74
4,600.0	0.32	329.82	4,599.7	25.6	23.2	25.9	0.04	-0.02	-5.26
4,700.0	0.43	324.53	4,699.7	26.2	22.8	26.5	0.12	0.11	-5.29
4,800.0	0.41	322.99	4,799.7	26.8	22.4	27.1	0.02	-0.02	-1.54
4,900.0	0.41	300.87	4,899.7	27.2	21.8	27.5	0.16	0.00	-22.12
5,000.0	0.41	289.20	4,999.7	27.5	21.2	27.8	0.08	0.00	-11.67
5,100.0	0.38	282.75	5,099.7	27.7	20.5	28.0	0.05	-0.03	-6.45
5,200.0	0.37	275.49	5,199.7	27.8	19.9	28.1	0.05	-0.01	-7.26

Gyrodata Survey Report



Company:	XTO Energy Inc.	Local Co-ordinate Reference:	Well Perla Negra Federal Com #3H
Project:	Lea County, NM (NAD27)	TVD Reference:	RKB @ 3811.0ft
Site:	Sec 24, TWN 19-S, RGE 34-E	MD Reference:	RKB @ 3811.0ft
Well:	Perla Negra Federal Com #3H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,300.0	0.34	279.18	5,299.7	27.9	19.3	28.2	0.04	-0.03	3.69	
5,400.0	0.30	285.04	5,399.7	28.0	18.7	28.3	0.05	-0.04	5.86	
5,500.0	0.25	290.79	5,499.7	28.2	18.3	28.4	0.06	-0.05	5.75	
5,600.0	0.22	297.05	5,599.7	28.3	17.9	28.6	0.04	-0.03	6.26	
5,700.0	0.24	281.39	5,699.7	28.5	17.5	28.7	0.07	0.02	-15.66	
5,800.0	0.39	237.87	5,799.7	28.3	17.0	28.5	0.27	0.15	-43.52	
5,900.0	0.44	230.85	5,899.7	27.9	16.4	28.1	0.07	0.05	-7.02	
6,000.0	0.46	228.03	5,999.7	27.4	15.9	27.6	0.03	0.02	-2.82	
6,100.0	0.51	239.96	6,099.6	26.9	15.2	27.1	0.11	0.05	11.93	
6,200.0	0.63	266.36	6,199.6	26.6	14.2	26.8	0.29	0.12	26.40	
6,300.0	0.82	272.93	6,299.6	26.6	13.0	26.8	0.21	0.19	6.57	
6,400.0	1.00	262.29	6,399.6	26.6	11.4	26.7	0.25	0.18	-10.64	
6,500.0	1.07	260.25	6,499.6	26.3	9.6	26.4	0.08	0.07	-2.04	
6,600.0	1.08	261.78	6,599.6	26.0	7.8	26.1	0.03	0.01	1.53	
6,700.0	0.99	273.85	6,699.6	25.9	6.0	26.0	0.24	-0.09	12.07	
6,800.0	0.95	271.57	6,799.6	26.0	4.3	26.0	0.06	-0.04	-2.28	
6,900.0	0.88	268.67	6,899.5	26.0	2.7	26.0	0.08	-0.07	-2.90	
7,000.0	0.79	266.98	6,999.5	25.9	1.2	26.0	0.09	-0.09	-1.69	
7,100.0	0.68	265.94	7,099.5	25.9	-0.1	25.9	0.11	-0.11	-1.04	
7,200.0	0.69	266.42	7,199.5	25.8	-1.3	25.8	0.01	0.01	0.48	
7,300.0	0.71	267.56	7,299.5	25.7	-2.5	25.7	0.02	0.02	1.14	
7,400.0	0.83	266.29	7,399.5	25.6	-3.8	25.6	0.12	0.12	-1.27	
7,500.0	0.91	267.91	7,499.5	25.6	-5.3	25.5	0.08	0.08	1.62	
7,600.0	0.74	271.59	7,599.5	25.6	-6.8	25.5	0.18	-0.17	3.68	
7,700.0	0.58	280.48	7,699.5	25.7	-7.9	25.6	0.19	-0.16	8.89	
7,800.0	0.44	303.69	7,799.5	26.0	-8.7	25.9	0.25	-0.14	23.21	
7,900.0	0.44	303.09	7,899.5	26.4	-9.4	26.3	0.00	0.00	-0.60	
8,000.0	0.39	287.50	7,999.5	26.7	-10.0	26.6	0.12	-0.05	-15.59	
8,100.0	0.28	224.34	8,099.5	26.6	-10.5	26.5	0.36	-0.11	-63.16	
8,200.0	0.33	232.75	8,199.5	26.3	-10.9	26.1	0.07	0.05	8.41	
8,300.0	0.49	246.93	8,299.5	25.9	-11.5	25.8	0.19	0.16	14.18	
8,400.0	0.52	248.16	8,399.5	25.6	-12.4	25.4	0.03	0.03	1.23	
8,500.0	0.48	253.86	8,499.5	25.3	-13.2	25.1	0.06	-0.04	5.70	
8,600.0	0.69	325.66	8,599.5	25.7	-13.9	25.5	0.71	0.21	71.80	
8,700.0	1.32	348.16	8,699.4	27.3	-14.5	27.1	0.73	0.63	22.50	
8,800.0	3.32	23.57	8,799.4	31.1	-13.6	30.9	2.37	2.00	35.41	
8,900.0	4.00	39.99	8,899.2	36.4	-10.2	36.3	1.24	0.68	16.42	
9,000.0	3.13	49.17	8,999.0	40.9	-5.9	40.8	1.04	-0.87	9.18	
9,100.0	2.34	54.36	9,098.8	43.9	-2.1	43.8	0.83	-0.79	5.19	
9,200.0	1.94	59.22	9,198.8	45.9	1.0	45.9	0.44	-0.40	4.86	
9,300.0	1.28	63.67	9,298.7	47.3	3.4	47.3	0.67	-0.66	4.45	
9,400.0	0.29	61.11	9,398.7	47.9	4.6	48.0	0.99	-0.99	-2.56	
9,500.0	0.74	228.77	9,498.7	47.6	4.4	47.7	1.03	0.45	167.66	

Gyrodata
Survey Report



Company:	XTO Energy Inc.	Local Co-ordinate Reference:	Well Perla Negra Federal Com #3H
Project:	Lea County, NM (NAD27)	TVD Reference:	RKB @ 3811.0ft
Site:	Sec 24, TWN 19-S, RGE 34-E	MD Reference:	RKB @ 3811.0ft
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Survey									
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9,600.0	1.53	229.20	9,598.7	46.3	2.9	46.3	0.79	0.79	0.43
9,700.0	1.70	231.06	9,698.7	44.5	0.7	44.5	0.18	0.17	1.86
9,800.0	1.77	228.80	9,798.6	42.5	-1.6	42.5	0.10	0.07	-2.26
9,900.0	1.33	235.83	9,898.6	40.9	-3.7	40.8	0.48	-0.44	7.03
10,000.0	1.28	236.28	9,998.6	39.6	-5.6	39.5	0.05	-0.05	0.45
10,100.0	1.15	234.12	10,098.5	38.4	-7.3	38.3	0.14	-0.13	-2.16
10,200.0	1.53	206.84	10,198.5	36.6	-8.8	36.5	0.73	0.38	-27.28
10,270.0	1.73	213.42	10,268.5	34.9	-9.8	34.8	0.39	0.29	9.40
10,332.0	1.42	338.02	10,330.5	34.8	-10.6	34.7	4.50	-0.50	200.97
10,364.0	5.76	353.81	10,362.4	36.8	-10.9	36.6	13.78	13.56	49.34
10,395.0	10.26	357.78	10,393.1	41.1	-11.2	41.0	14.62	14.52	12.81
10,427.0	14.48	0.72	10,424.3	48.0	-11.2	47.8	13.33	13.19	9.19
10,458.0	17.92	4.04	10,454.1	56.6	-10.8	56.4	11.49	11.10	10.71
10,489.0	20.66	6.25	10,483.4	66.8	-9.9	66.6	9.15	8.84	7.13
10,521.0	23.35	6.64	10,513.0	78.7	-8.6	78.6	8.42	8.41	1.22
10,552.0	26.00	6.34	10,541.2	91.6	-7.1	91.5	8.56	8.55	-0.97
10,584.0	28.32	5.74	10,569.7	106.1	-5.6	106.0	7.30	7.25	-1.87
10,615.0	29.68	2.52	10,596.8	121.1	-4.5	121.0	6.68	4.39	-10.39
10,647.0	33.33	1.28	10,624.1	137.8	-3.9	137.7	11.58	11.41	-3.87
10,678.0	37.90	1.07	10,649.3	155.8	-3.6	155.8	14.75	14.74	-0.68
10,709.0	41.89	1.26	10,673.0	175.7	-3.2	175.6	12.88	12.87	0.61
10,741.0	45.29	2.67	10,696.2	197.7	-2.4	197.7	11.05	10.62	4.41
10,773.0	47.51	3.83	10,718.3	220.9	-1.1	220.8	7.42	6.94	3.62
10,804.0	49.30	3.99	10,738.9	244.0	0.5	244.0	5.79	5.77	0.52
10,836.0	51.40	3.95	10,759.3	268.6	2.2	268.6	6.56	6.56	-0.12
10,867.0	53.82	2.74	10,778.1	293.2	3.6	293.2	8.40	7.81	-3.90
10,899.0	56.85	2.05	10,796.3	319.5	4.7	319.5	9.63	9.47	-2.16
10,930.0	59.41	2.15	10,812.7	345.8	5.7	345.8	8.26	8.26	0.32
10,962.0	62.15	0.61	10,828.3	373.7	6.4	373.7	9.54	8.56	-4.81
10,993.0	65.28	359.12	10,842.0	401.5	6.3	401.5	10.98	10.10	-4.81
11,025.0	69.11	358.85	10,854.4	431.0	5.8	431.0	11.99	11.97	-0.84
11,056.0	72.04	359.56	10,864.7	460.2	5.4	460.2	9.70	9.45	2.29
11,088.0	75.20	0.35	10,873.7	490.9	5.3	490.9	10.15	9.87	2.47
11,119.0	78.58	0.90	10,880.8	521.1	5.7	521.1	11.04	10.90	1.77
11,150.0	80.57	1.36	10,886.4	551.6	6.3	551.6	6.58	6.42	1.48
11,182.0	82.83	1.32	10,891.0	583.2	7.0	583.3	7.06	7.06	-0.12
11,198.9	84.74	0.87	10,892.8	600.0	7.3	600.0	11.64	11.34	-2.67
Interpolated FTP @ 11198'MD									
11,213.0	86.35	0.49	10,893.9	614.1	7.5	614.1	11.69	11.38	-2.69
11,277.0	90.69	359.71	10,895.6	678.0	7.6	678.1	6.89	6.78	-1.22
11,371.0	92.76	359.70	10,892.7	772.0	7.1	772.0	2.20	2.20	-0.01
11,465.0	92.42	0.43	10,888.5	865.9	7.2	865.9	0.86	-0.36	0.78
11,560.0	93.04	0.66	10,884.0	960.8	8.1	960.8	0.70	0.65	0.24
11,654.0	90.63	0.52	10,881.0	1,054.7	9.1	1,054.7	2.57	-2.56	-0.15

Gyrodata Survey Report



Company:	XTO Energy Inc.	Local Co-ordinate Reference:	Well Perla Negra Federal Com #3H
Project:	Lea County, NM (NAD27)	TVD Reference:	RKB @ 3811.0ft
Site:	Sec 24, TWN 19-S, RGE 34-E	MD Reference:	RKB @ 3811.0ft
Well:	Perla Negra Federal Com #3H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,748.0	92.06	0.37	10,878.8	1,148.7	9.8	1,148.7	1.53	1.52	-0.16
11,843.0	89.85	0.70	10,877.2	1,243.7	10.7	1,243.7	2.35	-2.33	0.35
11,937.0	91.13	1.13	10,876.4	1,337.6	12.2	1,337.7	1.44	1.36	0.46
12,032.0	89.31	1.63	10,876.0	1,432.6	14.5	1,432.7	1.99	-1.92	0.53
12,126.0	90.38	1.89	10,876.3	1,526.6	17.4	1,526.7	1.17	1.14	0.28
12,220.0	91.24	1.18	10,874.9	1,620.5	19.9	1,620.6	1.19	0.91	-0.76
12,314.0	92.67	0.96	10,871.7	1,714.4	21.7	1,714.6	1.54	1.52	-0.23
12,409.0	90.94	0.06	10,868.7	1,809.4	22.5	1,809.5	2.05	-1.82	-0.95
12,503.0	92.25	359.93	10,866.1	1,903.4	22.5	1,903.5	1.40	1.39	-0.14
12,598.0	91.41	0.36	10,863.1	1,998.3	22.7	1,998.4	0.99	-0.88	0.45
12,692.0	89.96	0.49	10,862.0	2,092.3	23.4	2,092.4	1.55	-1.54	0.14
12,786.0	90.71	0.84	10,861.4	2,186.3	24.5	2,186.4	0.88	0.80	0.37
12,881.0	92.03	0.76	10,859.1	2,281.2	25.9	2,281.4	1.39	1.39	-0.08
12,975.0	90.07	1.27	10,857.4	2,375.2	27.5	2,375.4	2.15	-2.09	0.54
13,070.0	91.38	1.19	10,856.2	2,470.2	29.6	2,470.4	1.38	1.38	-0.08
13,164.0	88.20	1.80	10,856.6	2,564.1	32.0	2,564.3	3.44	-3.38	0.65
13,258.0	88.53	1.73	10,859.2	2,658.0	34.9	2,658.3	0.36	0.35	-0.07
13,353.0	89.93	1.33	10,860.5	2,753.0	37.4	2,753.3	1.53	1.47	-0.42
13,447.0	91.36	0.92	10,859.5	2,847.0	39.3	2,847.2	1.58	1.52	-0.44
13,542.0	92.17	0.75	10,856.5	2,941.9	40.7	2,942.2	0.87	0.85	-0.18
13,636.0	90.49	1.22	10,854.3	3,035.9	42.3	3,036.2	1.86	-1.79	0.50
13,730.0	91.50	1.40	10,852.7	3,129.8	44.4	3,130.2	1.09	1.07	0.19
13,825.0	90.69	1.39	10,850.9	3,224.8	46.7	3,225.1	0.85	-0.85	-0.01
13,919.0	92.25	1.08	10,848.5	3,318.7	48.8	3,319.1	1.69	1.66	-0.33
14,014.0	89.90	0.57	10,846.7	3,413.7	50.1	3,414.1	2.53	-2.47	-0.54
14,108.0	90.71	0.53	10,846.2	3,507.7	51.0	3,508.1	0.86	0.86	-0.04
14,203.0	92.11	0.23	10,843.9	3,602.7	51.7	3,603.0	1.51	1.47	-0.32
14,297.0	90.66	0.52	10,841.6	3,696.6	52.3	3,697.0	1.57	-1.54	0.31
14,391.0	90.63	0.11	10,840.5	3,790.6	52.8	3,791.0	0.44	-0.03	-0.44
14,486.0	91.83	0.30	10,838.5	3,885.6	53.1	3,886.0	1.28	1.26	0.20
14,580.0	92.70	359.49	10,834.8	3,979.5	53.0	3,979.9	1.26	0.93	-0.86
14,674.0	94.86	359.03	10,828.6	4,073.3	51.8	4,073.6	2.35	2.30	-0.49
14,768.0	93.82	359.20	10,821.5	4,167.0	50.3	4,167.3	1.12	-1.11	0.18
14,862.0	92.53	359.03	10,816.3	4,260.9	48.9	4,261.1	1.38	-1.37	-0.18
14,957.0	90.99	358.82	10,813.3	4,355.8	47.1	4,356.0	1.64	-1.62	-0.22
15,051.0	90.99	358.85	10,811.7	4,449.8	45.2	4,450.0	0.03	0.00	0.03
15,146.0	91.70	359.08	10,809.5	4,544.7	43.5	4,544.9	0.79	0.75	0.24
15,240.0	89.96	359.17	10,808.1	4,638.7	42.0	4,638.8	1.85	-1.85	0.10
15,311.0	90.69	358.58	10,807.7	4,709.7	40.6	4,709.8	1.32	1.03	-0.83
15,357.4	90.69	358.58	10,807.2	4,756.1	39.5	4,756.2	0.00	0.00	0.00
Interpolated LTP @ 15357'MD									
15,493.0	90.69	358.58	10,805.5	4,891.6	36.1	4,891.6	0.00	0.00	0.00
Straight Line Projection to Bit Depth @ 15493'MD									

Gyrodatta
Survey Report



Company:	XTO Energy Inc.	Local Co-ordinate Reference:	Well Perla Negra Federal Com #3H
Project:	Lea County, NM (NAD27)	TVD Reference:	RKB @ 3811.0ft
Site:	Sec 24, TWN 19-S, RGE 34-E	MD Reference:	RKB @ 3811.0ft
Well:	Perla Negra Federal Com #3H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	Database:	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
11,198.9	10,892.8	600.0	7.3	Interpolated FTP @ 11198'MD
15,357.4	10,807.2	4,756.1	39.5	Interpolated LTP @ 15357'MD
15,493.0	10,805.5	4,891.6	36.1	Straight Line Projection to Bit Depth @ 15493'MD

Checked By: _____ Approved By: _____ Date: _____