



RECEIVED
FEB 27 2020
EMNRD-OGDARTESIA

I **Larry Wright**, certify that I am employed by **Wellbenders Directional Services**. That I did on the day(s) of **03/31/19** thru **05/09/19** conduct or supervise the taking of a **MWD Survey** from a depth of **100'** to a depth of **15802'**; that the data is true, correct, complete and within the limitations of the tool as set forth by **Wellbenders Directional Services**; that I am authorized and qualified to make this report; that this survey was conducted at the request of **XTO Energy Inc** for the **PLU 15 Twin Wells Ranch 102H** API No. **30-015-45053** in **Eddy County, New Mexico**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by **Wellbenders Directional Services**.

Larry Wright

Larry Wright
Digitally signed
by Larry Wright
Date:
2019.12.12
11:55:38 -06'00'

13901 Hwy 105W, Conroe, Texas
77304
PH 936-539-9602



Wellbenders End Of Well Report

Company: XTO Energy Project: Eddy County, NM (Nad-27 / East Zone) Site: PLU 15 Twin Wells Ranch Well: #102H Wellbore: OH Design: OH	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:	Well #102H: RKB = 26' @ 3556.00usft (Patterson 225) RKB = 26' @ 3556.00usft (Patterson 225) Grid Minimum Curvature WBDS SQL 2
--	--	---

Project Eddy County, NM (Nad-27 / East Zone)			
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 PLU 15 Twin Wells Ranch			
Site Position:	From: Map	Northing:	440,939.70 usft
		Easting:	676,390.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	32.210974
		Longitude:	-103.763016
		Grid Convergence:	0.304 °

Well #102H			
Well Position	+N-S 0.00 usft	Northing:	440,924.90 usft
	+E-W 0.00 usft	Easting:	674,200.80 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32.210965
		Longitude:	-103.770096
		Ground Level:	3,530.00 usft

Wellbore: OH			
Magnetics	Model Name:	Sample Date:	Declination
	IGRF2015	3/14/2019	(°)
			6.857
			59.997
			47,729.98437570

Design OH			
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			179.62

Survey Program		Date 5/22/2019	
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	15,802.00	Survey #1 (OH)	WBDS_IGRF
			OWSG MWD + IGRF or WMM



Wellbenders End Of Well Report

Company: XTO Energy
Project: Eddy County, NM (Nad-27 / East Zone)
Site: PLU 15 Twin Wells Ranch
Well: #102H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #102H
TVD Reference: RKB = 26' @ 3556.00usft (Patterson 225)
MD Reference: RKB = 26' @ 3556.00usft (Patterson 225)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS SQL-2

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (ft/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00
199.00	0.10	282.30	199.00	0.02	-0.08	-0.02	99.00	282.30	0.10
252.00	0.00	0.00	252.00	0.03	-0.13	-0.03	53.00	282.30	0.19
343.00	0.10	266.10	343.00	0.02	-0.21	-0.02	91.00	266.10	0.11
408.00	0.30	71.90	408.00	0.07	-0.10	-0.07	65.00	65.01	0.61
501.00	0.20	57.50	501.00	0.23	0.26	-0.23	93.00	66.15	0.13
594.00	0.20	73.80	594.00	0.37	0.56	-0.36	93.00	65.65	0.06
695.00	0.60	58.30	695.00	0.69	1.18	-0.69	101.00	62.16	0.41
789.00	0.60	48.60	788.99	1.28	1.96	-1.27	94.00	53.45	0.11
833.00	0.40	41.90	832.99	1.55	2.24	-1.53	44.00	45.92	0.47
973.00	0.75	34.15	972.98	2.67	3.08	-2.65	140.00	36.84	0.26
1,068.00	0.22	27.82	1,067.98	3.34	3.51	-3.32	95.00	32.72	0.56
1,162.00	0.22	227.25	1,161.98	3.38	3.47	-3.36	94.00	307.54	0.46
1,256.00	0.84	231.90	1,255.97	2.83	2.79	-2.81	94.00	230.94	0.66
1,351.00	0.84	240.69	1,350.96	2.06	1.64	-2.05	95.00	236.29	0.14
1,445.00	0.84	241.57	1,444.95	1.40	0.43	-1.39	94.00	241.13	0.01
1,540.00	1.19	238.67	1,539.94	0.55	-1.03	-0.56	95.00	239.87	0.37
1,635.00	1.10	242.36	1,634.92	-0.38	-2.68	0.37	95.00	240.44	0.12
1,729.00	1.10	236.91	1,728.90	-1.30	-4.23	1.27	94.00	239.63	0.11
1,824.00	1.01	235.07	1,823.89	-2.27	-5.68	2.23	95.00	236.03	0.10
1,919.00	1.23	231.64	1,918.87	-3.38	-7.17	3.34	95.00	233.19	0.24
2,014.00	1.67	234.89	2,013.84	-4.81	-9.10	4.75	95.00	233.51	0.47
2,108.00	2.07	231.29	2,107.79	-6.66	-11.54	6.59	94.00	232.90	0.44
2,203.00	2.24	230.59	2,202.72	-8.91	-14.32	8.82	95.00	230.93	0.18
2,298.00	2.55	226.54	2,297.64	-11.55	-17.29	11.43	95.00	228.43	0.37
2,392.00	2.64	226.10	2,391.54	-14.49	-20.36	14.35	94.00	226.32	0.10



Wellbenders End Of Well Report

Company: XTO Energy
Project: Eddy County, NM (Nad-27 / East Zone)
Site: PLU 15 Twin Wells Ranch
Well: #102H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #102H
TVD Reference: RKB = 26' @ 3556.00usft (Patterson 225)
MD Reference: RKB = 26' @ 3556.00usft (Patterson 225)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS SQL 2

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	D Leg (°/100ft)
2,486.00	2.90	219.60	2,485.43	-17.82	-23.44	17.66	94.00	222.70	0.43
2,580.00	3.21	217.93	2,579.30	-21.73	-26.57	21.55	94.00	218.72	0.34
2,675.00	3.65	217.23	2,674.13	-26.23	-30.04	26.03	95.00	217.56	0.47
2,769.00	2.73	238.06	2,767.98	-29.80	-33.75	29.58	94.00	226.13	1.56
2,864.00	2.15	234.98	2,862.90	-32.02	-37.13	31.77	95.00	236.70	0.63
2,958.00	2.07	235.95	2,956.83	-33.98	-39.98	33.72	94.00	235.46	0.09
3,053.00	1.71	237.35	3,051.78	-35.71	-42.59	35.42	95.00	236.58	0.38
3,147.00	1.63	233.14	3,145.74	-37.27	-44.84	36.97	94.00	235.30	0.16
3,241.00	1.19	226.28	3,239.71	-38.74	-46.62	38.43	94.00	230.25	0.50
3,336.00	1.10	222.24	3,334.69	-40.10	-47.94	39.78	95.00	224.34	0.13
3,430.00	1.45	217.84	3,428.67	-41.71	-49.28	41.38	94.00	219.74	0.39
3,525.00	1.27	220.74	3,523.64	-43.45	-50.70	43.12	95.00	219.19	0.20
3,618.00	1.05	168.71	3,616.63	-45.07	-51.21	44.73	93.00	197.37	1.11
3,712.00	2.55	135.84	3,710.58	-47.42	-49.58	47.09	94.00	145.27	1.88
3,807.00	3.82	133.99	3,805.43	-51.13	-45.84	50.82	95.00	134.73	1.34
3,901.00	2.81	138.65	3,899.27	-55.03	-42.06	54.75	94.00	135.97	1.11
3,996.00	4.44	137.86	3,994.08	-59.51	-38.05	59.26	95.00	138.17	1.72
4,091.00	4.70	149.20	4,088.78	-65.58	-33.59	65.35	95.00	143.69	0.99
4,186.00	4.75	162.91	4,183.46	-72.68	-30.45	72.48	95.00	156.09	1.19
4,285.00	3.52	160.45	4,282.20	-79.46	-28.22	79.28	99.00	161.86	1.25
4,374.00	3.21	165.72	4,371.05	-84.45	-26.69	84.27	89.00	162.96	0.49
4,469.00	2.99	165.46	4,465.91	-89.43	-25.42	89.26	95.00	165.59	0.23
4,564.00	2.99	192.27	4,560.78	-94.25	-25.32	94.08	95.00	178.87	1.46
4,658.00	4.00	226.10	4,654.62	-98.92	-28.21	98.73	94.00	211.70	2.39
4,753.00	4.62	249.75	4,749.35	-102.54	-34.18	102.31	95.00	238.79	1.96
4,848.00	3.78	259.85	4,844.10	-104.42	-40.85	104.14	95.00	254.29	1.17
4,942.00	3.34	266.18	4,937.92	-105.15	-46.64	104.83	94.00	262.82	0.63



Wellbenders End Of Well Report

Company: XTO Energy
Project: Eddy County, NM (Nad-27 / East Zone)
Site: PLU 15 Twin Wells Ranch
Well: #102H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #102H
TVD Reference: RKB = 26' @ 3556.00usft (Patterson 225)
MD Reference: RKB = 26' @ 3556.00usft (Patterson 225)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WBDS"SQL 2

Survey

MD (usft)	Inc. (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL/Azi (°)	DLeg (ft/100ft)
5,037.00	3.43	266.53	5,032.75	-105.50	-52.23	105.15	95.00	266.36	0.10
5,131.00	3.34	263.19	5,126.59	-106.00	-57.76	105.61	94.00	264.88	0.23
5,224.00	3.21	262.49	5,219.44	-106.66	-63.03	106.24	93.00	262.85	0.15
5,319.00	3.16	263.98	5,314.29	-107.28	-68.27	106.83	95.00	263.23	0.10
5,414.00	3.21	266.97	5,409.14	-107.70	-73.53	107.21	95.00	265.49	0.18
5,508.00	3.25	267.32	5,502.99	-107.96	-78.82	107.43	94.00	267.15	0.05
5,602.00	3.12	265.04	5,596.85	-108.31	-84.03	107.75	94.00	266.20	0.19
5,697.00	3.52	261.44	5,691.69	-108.96	-89.49	108.37	95.00	263.13	0.47
5,790.00	3.74	263.90	5,784.50	-109.71	-95.33	109.08	93.00	262.71	0.29
5,885.00	2.68	285.69	5,879.36	-109.44	-100.55	108.77	95.00	272.98	1.68
5,979.00	2.64	294.66	5,973.25	-107.94	-104.63	107.24	94.00	290.14	0.44
6,074.00	2.73	297.30	6,068.15	-105.99	-108.63	105.27	95.00	296.00	0.16
6,168.00	2.59	294.83	6,162.05	-104.07	-112.55	103.32	94.00	296.10	0.19
6,262.00	2.99	294.31	6,255.94	-102.17	-116.71	101.39	94.00	294.55	0.43
6,355.00	2.90	294.04	6,348.81	-100.21	-121.07	99.41	93.00	294.18	0.10
6,450.00	2.95	291.23	6,443.69	-98.35	-125.54	97.52	95.00	292.62	0.16
6,544.00	3.25	290.09	6,537.55	-96.56	-130.30	95.69	94.00	290.63	0.33
6,638.00	1.80	308.72	6,631.46	-94.72	-133.96	93.83	94.00	296.71	1.75
6,732.00	0.75	33.18	6,725.44	-93.28	-134.77	92.39	94.00	330.46	2.00
6,827.00	1.10	51.47	6,820.43	-92.19	-133.72	91.30	95.00	44.07	0.48
6,922.00	0.92	52.17	6,915.41	-91.16	-132.40	90.28	95.00	51.79	0.19
7,017.00	0.88	53.93	7,010.40	-90.26	-131.21	89.39	95.00	53.03	0.05
7,111.00	0.66	38.28	7,104.39	-89.41	-130.29	88.54	94.00	47.23	0.32
7,206.00	0.79	56.21	7,199.39	-88.62	-129.41	87.76	95.00	48.06	0.27
7,300.00	0.62	70.54	7,293.38	-88.09	-128.39	87.23	94.00	62.51	0.26
7,395.00	0.79	75.81	7,388.37	-87.75	-127.27	86.91	95.00	73.49	0.19
7,489.00	0.66	77.13	7,482.37	-87.48	-126.11	86.64	94.00	76.41	0.14



Wellbenders End Of Well Report

Company: XTO Energy
Project: Eddy County, NM (Nad-27 / East Zone)
Site: PLU 15 Twin Wells Ranch
Well: #102H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #102H
RKB = 26' @ 3556.00usft (Patterson 225)
RKB = 26' @ 3556.00usft (Patterson 225)
Grid
Minimum Curvature
WBDS_SQL_2

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLag (°/100ft)
7,584.00	0.79	87.68	7,577.36	-87.33	-124.93	86.50	95.00	82.88	0.20
7,679.00	0.88	73.53	7,672.35	-87.09	-123.57	86.27	95.00	80.22	0.24
7,774.00	0.79	85.57	7,767.34	-86.84	-122.22	86.02	95.00	79.22	0.21
7,868.00	1.01	89.61	7,861.33	-86.78	-120.74	85.98	94.00	87.84	0.24
7,963.00	1.01	95.15	7,956.31	-86.85	-119.07	86.06	95.00	92.38	0.10
8,058.00	1.05	90.22	8,051.30	-86.93	-117.37	86.15	95.00	92.64	0.10
8,152.00	0.88	94.00	8,145.28	-86.98	-115.79	86.21	94.00	91.94	0.19
8,246.00	1.01	95.23	8,239.27	-87.11	-114.24	86.35	94.00	94.66	0.14
8,341.00	0.84	93.04	8,334.26	-87.22	-112.71	86.47	95.00	94.24	0.18
8,435.00	0.62	88.47	8,428.25	-87.24	-111.52	86.50	94.00	91.10	0.24
8,530.00	0.66	97.17	8,523.24	-87.30	-110.46	86.56	95.00	92.96	0.11
8,624.00	0.75	104.55	8,617.24	-87.52	-109.33	86.79	94.00	101.10	0.14
8,719.00	0.57	95.94	8,712.23	-87.73	-108.26	87.01	95.00	100.83	0.22
8,813.00	0.40	142.70	8,806.23	-88.04	-107.59	87.32	94.00	114.99	0.44
8,908.00	0.35	204.04	8,901.23	-88.56	-107.51	87.85	95.00	171.11	0.41
9,002.00	0.57	187.78	8,995.22	-89.29	-107.69	88.57	94.00	193.95	0.27
9,097.00	0.53	218.98	9,090.22	-90.10	-108.03	89.38	95.00	202.80	0.31
9,192.00	0.88	219.34	9,185.21	-91.01	-108.77	90.28	95.00	219.20	0.37
9,285.00	0.84	228.48	9,278.20	-92.01	-109.73	91.28	93.00	223.80	0.15
9,380.00	0.84	258.54	9,373.19	-92.61	-110.94	91.87	95.00	243.51	0.46
9,474.00	0.79	269.70	9,467.18	-92.75	-112.26	92.00	94.00	263.95	0.18
9,570.00	0.57	268.03	9,563.17	-92.77	-113.40	92.02	96.00	269.00	0.23
9,664.00	0.62	260.38	9,657.17	-92.87	-114.37	92.11	94.00	264.04	0.10
9,759.00	0.84	223.20	9,752.16	-93.46	-115.35	92.70	95.00	238.89	0.54
9,853.00	0.44	194.29	9,846.16	-94.32	-115.91	93.55	94.00	213.35	0.53
9,947.00	0.35	170.56	9,940.15	-94.95	-115.95	94.18	94.00	183.80	0.20
10,041.00	0.70	105.87	10,034.15	-95.39	-115.35	94.62	94.00	126.30	0.68



Wellbenders End Of Well Report

Company: XTO Energy
Project: Eddy County, NM (Nad-27 / East Zone)
Site: PLU 15 Twin Wells Ranch
Well: #102H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #102H
 RKB = 26' @ 3556.00usft (Patterson 225)
 RKB = 26' @ 3556.00usft (Patterson 225)
 Grid:
 Minimum Curvature
 WBDS SQL 2

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL/Azi (°)	D Leg (°/100ft)
10,136.00	0.88	111.76	10,129.14	-95.82	-114.12	95.06	95.00	109.15	0.21
10,230.00	0.35	198.51	10,223.14	-96.36	-113.54	95.60	94.00	132.98	0.99
10,324.00	0.48	274.88	10,317.14	-96.60	-114.02	95.84	94.00	243.72	0.56
10,419.00	0.70	274.97	10,412.13	-96.51	-115.00	95.75	95.00	274.93	0.23
10,503.00	0.62	238.50	10,496.13	-96.71	-115.90	95.94	84.00	257.88	0.50
10,610.00	0.62	186.90	10,603.12	-97.58	-116.46	96.81	107.00	212.70	0.50
10,705.00	0.88	173.81	10,698.11	-98.82	-116.44	98.04	95.00	179.22	0.33
10,799.00	0.84	176.89	10,792.10	-100.22	-116.33	99.45	94.00	175.31	0.07
10,894.00	1.10	190.86	10,887.09	-101.82	-116.46	101.04	95.00	184.82	0.37
10,988.00	0.84	198.42	10,981.07	-103.36	-116.85	102.58	94.00	194.13	0.31
11,091.00	1.45	184.88	11,084.05	-105.37	-117.20	104.59	103.00	189.84	0.64
11,139.00	8.26	186.90	11,131.85	-109.40	-117.66	108.62	48.00	186.60	14.19
11,186.00	13.63	187.34	11,177.98	-118.25	-118.78	117.46	47.00	187.17	11.43
11,233.00	16.04	186.73	11,223.41	-130.20	-120.25	129.40	47.00	187.01	5.14
11,280.00	17.71	186.20	11,268.39	-143.75	-121.78	142.94	47.00	186.45	3.57
11,327.00	18.77	186.03	11,313.02	-158.38	-123.35	157.56	47.00	186.11	2.26
11,374.00	18.90	185.32	11,357.51	-173.48	-124.85	172.65	47.00	185.67	0.56
11,421.00	19.69	185.85	11,401.87	-188.93	-126.36	188.09	47.00	185.59	1.72
11,468.00	19.82	185.23	11,446.10	-204.75	-127.89	203.89	47.00	185.54	0.52
11,516.00	24.66	184.00	11,490.52	-222.85	-129.33	221.99	48.00	184.55	10.13
11,563.00	29.71	183.13	11,532.31	-244.27	-130.65	243.40	47.00	183.53	10.78
11,610.00	31.69	182.60	11,572.72	-268.24	-131.85	267.36	47.00	182.86	4.25
11,657.00	32.79	182.51	11,612.48	-293.29	-132.97	292.40	47.00	182.55	2.34
11,689.00	35.16	181.89	11,639.01	-311.15	-133.65	310.26	32.00	182.19	7.48
11,720.00	38.02	181.10	11,663.90	-329.62	-134.13	328.73	31.00	181.48	9.35
11,752.00	40.79	180.40	11,688.62	-349.93	-134.39	349.04	32.00	180.74	8.77
11,783.00	45.49	179.43	11,711.24	-371.12	-134.35	370.23	31.00	179.89	15.31



Wellbenders End Of Well Report

Company: XTO Energy
Project: Eddy County, NM (Nad-27 / East Zone)
Site: PLU 15 Twin Wells Ranch
Well: #102H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #102H
RKB = 26' @ 3556.00usft (Patterson 225)
RKB = 26' @ 3556.00usft (Patterson 225)
Grid:
Minimum Curvature
WBDS: SQL_2

Survey:

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	D Leg (?/100ft)
11,815.00	49.67	179.35	11,732.82	-394.74	-134.10	393.84	32.00	179.39	13.06
11,847.00	53.19	179.61	11,752.77	-419.76	-133.87	418.86	32.00	179.48	11.02
11,878.00	57.54	180.93	11,770.38	-445.25	-134.00	444.36	31.00	180.29	14.46
11,909.00	61.27	182.25	11,786.16	-471.92	-134.75	471.02	31.00	181.60	12.58
11,941.00	65.41	182.07	11,800.51	-500.49	-135.83	499.58	32.00	182.16	12.95
11,972.00	70.15	180.93	11,812.23	-529.17	-136.57	528.26	31.00	181.49	15.66
12,004.00	74.68	180.14	11,821.90	-559.67	-136.85	558.75	32.00	180.53	14.35
12,035.00	77.41	180.05	11,829.37	-589.75	-136.90	588.83	31.00	180.09	8.81
12,083.00	79.91	180.66	11,838.81	-636.81	-137.20	635.89	48.00	180.36	5.36
12,130.00	83.47	181.54	11,845.60	-683.30	-138.09	682.37	47.00	181.10	7.80
12,224.00	88.62	179.87	11,852.08	-777.03	-139.24	776.09	94.00	180.70	5.76
12,254.00	89.19	179.35	11,852.66	-807.03	-139.04	806.09	30.00	179.61	2.57
12,348.00	89.19	178.82	11,853.99	-901.01	-137.53	900.07	94.00	179.09	0.56
12,442.00	89.01	177.94	11,855.46	-994.95	-134.88	994.04	94.00	178.38	0.96
12,537.00	89.19	177.76	11,856.95	-1,089.88	-131.31	1,088.98	95.00	177.85	0.27
12,631.00	90.46	180.05	11,857.24	-1,183.85	-129.52	1,182.97	94.00	178.91	2.79
12,726.00	92.00	179.87	11,855.20	-1,278.83	-129.45	1,277.94	95.00	179.96	1.63
12,820.00	89.67	180.58	11,853.83	-1,372.81	-129.82	1,371.92	94.00	180.23	2.59
12,915.00	93.32	180.66	11,851.35	-1,467.75	-130.85	1,466.85	95.00	180.62	3.84
13,010.00	92.31	179.43	11,846.69	-1,562.64	-130.92	1,561.73	95.00	180.04	1.67
13,104.00	90.20	178.91	11,844.63	-1,656.60	-129.56	1,655.70	94.00	179.17	2.31
13,199.00	87.91	179.87	11,846.20	-1,751.57	-128.55	1,750.68	95.00	179.39	2.61
13,294.00	88.13	179.87	11,849.48	-1,846.52	-128.33	1,845.62	95.00	179.87	0.23
13,389.00	89.49	179.17	11,851.45	-1,941.49	-127.54	1,940.60	95.00	179.52	1.61
13,483.00	87.78	179.87	11,853.69	-2,035.45	-126.75	2,034.57	94.00	179.52	1.97
13,577.00	88.22	179.17	11,856.97	-2,129.39	-125.96	2,128.51	94.00	179.52	0.88
13,670.00	88.88	178.03	11,859.33	-2,222.33	-123.69	2,221.46	93.00	178.60	1.42



Wellbenders End Of Well Report

Company: XTO Energy
Project: Eddy County, NM (Nad-27 / East Zone)
Site: PLU 15 Twin Wells Ranch
Well: #102H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #102H
 RKB = 26' @ 3556.00usft (Patterson 225)
 RKB = 26' @ 3556.00usft (Patterson 225)
 Grid
 Minimum Curvature
 WBDS=SQL2

Survey

MD (usft)	Inc. (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
13,765.00	89.89	179.35	11,860.34	-2,317.30	-121.52	2,316.44	95.00	178.69	1.75
13,858.00	89.45	180.75	11,860.88	-2,410.30	-121.60	2,409.44	93.00	180.05	1.58
13,953.00	85.05	182.69	11,865.44	-2,505.12	-124.45	2,504.24	95.00	181.72	5.06
14,048.00	87.60	181.19	11,871.53	-2,599.86	-127.65	2,598.95	95.00	181.94	3.11
14,142.00	90.07	180.93	11,873.44	-2,693.81	-129.39	2,692.90	94.00	181.06	2.64
14,241.00	89.45	180.31	11,873.85	-2,792.81	-130.46	2,791.88	99.00	180.62	0.89
14,335.00	90.29	179.96	11,874.07	-2,886.80	-130.68	2,885.87	94.00	180.13	0.97
14,431.00	90.59	179.26	11,873.33	-2,982.80	-130.03	2,981.87	96.00	179.61	0.79
14,525.00	91.74	178.64	11,871.42	-3,076.76	-128.31	3,075.84	94.00	178.95	1.39
14,620.00	90.51	179.70	11,869.55	-3,171.73	-126.93	3,170.82	95.00	179.17	1.71
14,714.00	90.55	178.82	11,868.68	-3,265.72	-125.72	3,264.81	94.00	179.26	0.94
14,807.00	91.16	176.97	11,867.29	-3,358.64	-122.30	3,357.75	93.00	177.90	2.09
14,901.00	90.02	177.15	11,866.33	-3,452.51	-117.48	3,451.65	94.00	177.06	1.23
14,996.00	89.27	178.82	11,866.92	-3,547.44	-114.14	3,546.61	95.00	177.98	1.93
15,091.00	90.07	177.06	11,867.46	-3,642.38	-110.73	3,641.56	95.00	177.94	2.03
15,185.00	89.32	178.82	11,867.96	-3,736.31	-107.35	3,735.52	94.00	177.94	2.04
15,279.00	89.27	180.58	11,869.12	-3,830.30	-106.86	3,829.51	94.00	179.70	1.87
15,374.00	90.81	179.87	11,869.05	-3,925.29	-107.23	3,924.50	95.00	180.23	1.79
15,468.00	92.48	178.73	11,866.36	-4,019.24	-106.08	4,018.45	94.00	179.30	2.15
15,563.00	90.46	179.08	11,863.92	-4,114.19	-104.27	4,113.41	95.00	178.91	2.16
15,657.00	90.33	181.37	11,863.27	-4,208.18	-104.64	4,207.39	94.00	180.23	2.44
15,742.36	90.11	181.02	11,862.94	-4,293.52	-106.42	4,292.72	85.36	181.19	0.48
15,752.00	90.15	181.19	11,862.92	-4,303.16	-106.60	4,302.36	9.64	181.10	1.81
15,802.00	90.15	181.19	11,862.79	-4,353.15	-107.64	4,352.34	50.00	181.19	0.00

Final Station Closure Distance= 4354.48 /Direction= 181.42 - TD: Y= 436571.75 / X= 674093.16 - TD: Latitude = 32.199000 / Longitude = -103.770518 - Projection to Bit: 15802.00' MD/ 11862.79' TVD



Wellbenders
End Of Well Report

Company: XTO Energy
Project: Eddy County, NM (Nad-27 / East Zone)
Site: PLU 15 Twin Wells Ranch
Well: #102H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:
Well: #102H
RKB = 26' @ 3556.00usft (Patterson 225)
RKB = 26' @ 3556.00usft (Patterson 225)
Grid:
Minimum Curvature:
WBDS: SQL 22

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
15,802.00	11,862.79	-4,353.15	-107.64	Final Station Closure Distance= 4354.48 /Direction= 181.42
15,802.00	11,862.79	-4,353.15	-107.64	TD: Y= 436571.75 / X= 674093.16
15,802.00	11,862.79	-4,353.15	-107.64	TD: Latitude = 32.199000 / Longitude = -103.770518
15,802.00	11,862.79	-4,353.15	-107.64	Projection to Bit: 15802.00' MD/ 11862.79' TVD

Checked By: _____ Approved By: _____ Date: _____



Weatherford

Drilling Services
10000 West County Rd. 116
P.O. Box 61028
Midland, TX USA 79711
Tel. (432) 561-8892 Fax (432) 561-8895

XTO Energy Inc.
6401 Holiday Hill Road BLDG 5
Midland, TX, 79707

Date: May 21, 2019

Attention: Jake Coykendall

Re: XTO Energy Inc.
Well: PLU 15 Twin Wells Ranch 102H
Eddy County, New Mexico

RECEIVED

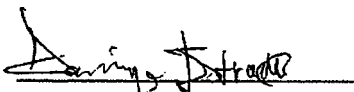
FEB 27 2020

EMNRD-OC DARTESIA

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

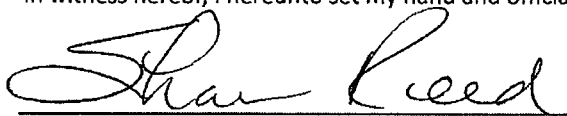
<u>Name & Title Of Surveyor</u>	<u>Well Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Wilfred Okoro	102H	15,849 MD	5/11/2019	Measurement
MWD Supervisor		24,798 MD	5/19/2019	While Drilling

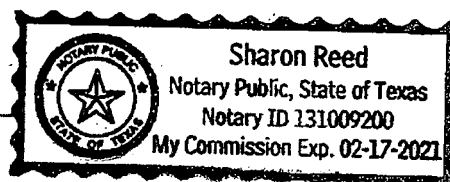
A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.


Domingo Estrada
MWD Ops. Coordinator

On this, the 21st day of May, 2019, before me a notary public, the undersigned officer, personally appeared Domingo Estrada, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.


Notary Public





Weatherford®

SURVEY REPORT

EMERSON OGDARTESIA

Report Date: 5/19/2019

Customer: XTO Energy Inc.

Job Name: 13761168

Well Name: PLU 15 Twin Wells Ranch 102H

Field: Delaware Basin

Rig: Patterson 225

Rig Loc: Eddy Co., NM

Survey Calculation Method: Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
Grid North	179.62 deg	47752 nT	59.93 deg	6.91 deg	0.30 deg	6.61 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	0.00 ft	0.00 deg	0.00 deg	0.00 ft	0.00 ft	0.00 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
199.00	0.10	282.30	199.00	0.02	-0.08	-0.02	0.10
252.00	0.00	0.00	252.00	0.03	-0.13	-0.03	0.19
343.00	0.10	266.10	343.00	0.02	-0.21	-0.02	0.11
408.00	0.30	71.90	408.00	0.07	-0.10	-0.07	0.61
501.00	0.20	57.50	501.00	0.23	0.26	-0.23	0.13
594.00	0.20	73.80	594.00	0.37	0.56	-0.36	0.06
695.00	0.60	58.30	695.00	0.69	1.18	-0.69	0.41
789.00	0.60	48.60	788.99	1.28	1.96	-1.27	0.11
833.00	0.40	41.90	832.99	1.55	2.24	-1.53	0.47
973.00	0.75	34.15	972.98	2.67	3.08	-2.65	0.26
1068.00	0.22	27.82	1067.98	3.34	3.51	-3.32	0.56
1162.00	0.22	227.25	1161.98	3.38	3.47	-3.36	0.46
1256.00	0.84	231.90	1255.97	2.83	2.79	-2.81	0.66
1351.00	0.84	240.69	1350.96	2.06	1.64	-2.05	0.14
1445.00	0.84	241.57	1444.95	1.40	0.43	-1.39	0.01
1540.00	1.19	238.67	1539.94	0.55	-1.03	-0.56	0.37
1635.00	1.10	242.36	1634.92	-0.38	-2.68	0.37	0.12
1729.00	1.10	236.91	1728.90	-1.30	-4.23	1.27	0.11
1824.00	1.01	235.07	1823.89	-2.27	-5.68	2.23	0.10
1919.00	1.23	231.64	1918.87	-3.38	-7.17	3.34	0.24
2014.00	1.67	234.89	2013.84	-4.81	-9.10	4.75	0.47
2108.00	2.07	231.29	2107.79	-6.66	-11.54	6.59	0.44
2203.00	2.24	230.59	2202.72	-8.91	-14.32	8.82	0.18
2298.00	2.55	226.54	2297.64	-11.55	-17.29	11.43	0.37
2392.00	2.64	226.10	2391.54	-14.49	-20.36	14.35	0.10
2486.00	2.90	219.60	2485.43	-17.82	-23.44	17.66	0.43
2580.00	3.21	217.93	2579.30	-21.73	-26.57	21.55	0.34
2675.00	3.65	217.23	2674.13	-26.23	-30.04	26.03	0.47
2769.00	2.73	238.06	2767.98	-29.80	-33.75	29.58	1.56
2864.00	2.15	234.98	2862.90	-32.02	-37.13	31.77	0.63
2958.00	2.07	235.95	2956.83	-33.98	-39.98	33.72	0.09
3053.00	1.71	237.35	3051.78	-35.71	-42.59	35.42	0.38
3147.00	1.63	233.14	3145.74	-37.27	-44.84	36.97	0.16

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
3241.00	1.19	226.28	3239.71	-38.74	-46.62	38.43	0.50
3336.00	1.10	222.24	3334.69	-40.10	-47.94	39.78	0.13
3430.00	1.45	217.84	3428.67	-41.71	-49.28	41.38	0.39
3525.00	1.27	220.74	3523.64	-43.45	-50.70	43.12	0.20
3618.00	1.05	168.71	3616.63	-45.07	-51.21	44.73	1.11
3712.00	2.55	135.84	3710.58	-47.42	-49.58	47.09	1.88
3807.00	3.82	133.99	3805.43	-51.13	-45.84	50.82	1.34
3901.00	2.81	138.65	3899.27	-55.03	-42.06	54.75	1.11
3996.00	4.44	137.86	3994.08	-59.51	-38.05	59.26	1.72
4091.00	4.70	149.20	4088.78	-65.58	-33.59	65.35	0.99
4186.00	4.75	162.91	4183.46	-72.68	-30.45	72.48	1.19
4285.00	3.52	160.45	4282.20	-79.46	-28.22	79.28	1.25
4374.00	3.21	165.72	4371.05	-84.45	-26.69	84.27	0.49
4469.00	2.99	165.46	4465.91	-89.43	-25.42	89.26	0.23
4564.00	2.99	192.27	4560.78	-94.25	-25.32	94.08	1.46
4658.00	4.00	226.10	4654.61	-98.92	-28.21	98.73	2.39
4753.00	4.62	249.75	4749.35	-102.54	-34.18	102.31	1.96
4848.00	3.78	259.85	4844.10	-104.42	-40.85	104.14	1.17
4942.00	3.34	266.18	4937.92	-105.15	-46.64	104.83	0.63
5037.00	3.43	266.53	5032.75	-105.50	-52.23	105.15	0.10
5131.00	3.34	263.19	5126.59	-106.00	-57.76	105.61	0.23
5224.00	3.21	262.49	5219.44	-106.66	-63.03	106.24	0.15
5319.00	3.16	263.98	5314.29	-107.28	-68.27	106.83	0.10
5414.00	3.21	266.97	5409.14	-107.70	-73.53	107.21	0.18
5508.00	3.25	267.32	5502.99	-107.96	-78.82	107.43	0.05
5602.00	3.12	265.04	5596.85	-108.31	-84.03	107.75	0.19
5697.00	3.52	261.44	5691.69	-108.96	-89.49	108.37	0.47
5790.00	3.74	263.90	5784.50	-109.71	-95.33	109.08	0.29
5885.00	2.68	285.69	5879.35	-109.44	-100.55	108.77	1.68
5979.00	2.64	294.66	5973.25	-107.94	-104.63	107.24	0.44
6074.00	2.73	297.30	6068.15	-105.99	-108.63	105.27	0.16
6168.00	2.59	294.83	6162.05	-104.07	-112.55	103.32	0.19
6262.00	2.99	294.31	6255.94	-102.17	-116.71	101.39	0.43
6355.00	2.90	294.04	6348.81	-100.21	-121.07	99.41	0.10
6450.00	2.95	291.23	6443.69	-98.35	-125.54	97.52	0.16
6544.00	3.25	290.09	6537.55	-96.56	-130.30	95.69	0.33
6638.00	1.80	308.72	6631.46	-94.72	-133.96	93.83	1.75
6732.00	0.75	33.18	6725.44	-93.28	-134.77	92.39	2.00
6827.00	1.10	51.47	6820.43	-92.19	-133.72	91.30	0.48
6922.00	0.92	52.17	6915.41	-91.16	-132.40	90.28	0.19
7017.00	0.88	53.93	7010.40	-90.26	-131.21	89.39	0.05
7111.00	0.66	38.28	7104.39	-89.41	-130.29	88.54	0.32
7206.00	0.79	56.21	7199.39	-88.62	-129.41	87.76	0.27
7300.00	0.62	70.54	7293.38	-88.09	-128.39	87.23	0.26
7395.00	0.79	75.81	7388.37	-87.75	-127.27	86.91	0.19
7489.00	0.66	77.13	7482.36	-87.48	-126.11	86.64	0.14
7584.00	0.79	87.68	7577.36	-87.33	-124.93	86.50	0.20
7679.00	0.88	73.53	7672.35	-87.09	-123.57	86.27	0.24
7774.00	0.79	85.57	7767.34	-86.84	-122.22	86.02	0.21
7868.00	1.01	89.61	7861.32	-86.78	-120.74	85.98	0.24

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
7963.00	1.01	95.15	7956.31	-86.85	-119.07	86.06	0.10
8058.00	1.05	90.22	8051.29	-86.93	-117.37	86.15	0.10
8152.00	0.88	94.00	8145.28	-86.98	-115.79	86.21	0.19
8246.00	1.01	95.23	8239.27	-87.11	-114.24	86.35	0.14
8341.00	0.84	93.04	8334.26	-87.22	-112.71	86.47	0.18
8435.00	0.62	88.47	8428.25	-87.24	-111.52	86.50	0.24
8530.00	0.66	97.17	8523.24	-87.30	-110.46	86.56	0.11
8624.00	0.75	104.55	8617.23	-87.52	-109.33	86.79	0.14
8719.00	0.57	95.94	8712.23	-87.73	-108.26	87.01	0.22
8813.00	0.40	142.70	8806.22	-88.04	-107.59	87.32	0.44
8908.00	0.35	204.04	8901.22	-88.56	-107.51	87.85	0.41
9002.00	0.57	187.78	8995.22	-89.29	-107.69	88.57	0.27
9097.00	0.53	218.98	9090.22	-90.10	-108.03	89.38	0.31
9192.00	0.88	219.34	9185.21	-91.01	-108.77	90.28	0.37
9285.00	0.84	228.48	9278.20	-92.01	-109.73	91.28	0.15
9380.00	0.84	258.54	9373.19	-92.61	-110.94	91.87	0.46
9474.00	0.79	269.70	9467.18	-92.75	-112.26	92.00	0.18
9570.00	0.57	268.03	9563.17	-92.77	-113.40	92.02	0.23
9664.00	0.62	260.38	9657.17	-92.87	-114.37	92.11	0.10
9759.00	0.84	223.20	9752.16	-93.46	-115.35	92.70	0.54
9853.00	0.44	194.29	9846.15	-94.32	-115.91	93.55	0.53
9947.00	0.35	170.56	9940.15	-94.95	-115.95	94.18	0.20
10041.00	0.70	105.87	10034.15	-95.39	-115.35	94.62	0.68
10136.00	0.88	111.76	10129.14	-95.82	-114.12	95.06	0.21
10230.00	0.35	198.51	10223.13	-96.36	-113.54	95.60	0.99
10324.00	0.48	274.88	10317.13	-96.60	-114.02	95.84	0.56
10419.00	0.70	274.97	10412.13	-96.51	-115.00	95.75	0.23
10503.00	0.62	238.50	10496.12	-96.71	-115.90	95.94	0.50
10610.00	0.62	186.90	10603.12	-97.58	-116.46	96.81	0.50
10705.00	0.88	173.81	10698.11	-98.82	-116.44	98.04	0.33
10799.00	0.84	176.89	10792.10	-100.22	-116.33	99.45	0.07
10894.00	1.10	190.86	10887.08	-101.82	-116.46	101.04	0.37
10988.00	0.84	198.42	10981.07	-103.36	-116.85	102.58	0.31
11091.00	1.45	184.88	11084.05	-105.37	-117.20	104.59	0.64
11139.00	8.26	186.90	11131.85	-109.40	-117.66	108.62	14.19
11186.00	13.63	187.34	11177.98	-118.25	-118.78	117.46	11.43
11233.00	16.04	186.73	11223.41	-130.20	-120.25	129.40	5.14
11280.00	17.71	186.20	11268.38	-143.75	-121.78	142.94	3.57
11327.00	18.77	186.03	11313.02	-158.38	-123.35	157.56	2.26
11374.00	18.90	185.32	11357.50	-173.48	-124.85	172.65	0.56
11421.00	19.69	185.85	11401.86	-188.93	-126.36	188.09	1.72
11468.00	19.82	185.23	11446.10	-204.75	-127.89	203.89	0.52
11516.00	24.66	184.00	11490.51	-222.85	-129.33	221.99	10.13
11563.00	29.71	183.13	11532.31	-244.27	-130.65	243.40	10.78
11610.00	31.69	182.60	11572.72	-268.24	-131.85	267.36	4.25
11657.00	32.79	182.51	11612.47	-293.29	-132.97	292.40	2.34
11689.00	35.16	181.89	11639.01	-311.15	-133.65	310.26	7.48
11720.00	38.02	181.10	11663.90	-329.62	-134.13	328.73	9.35
11752.00	40.79	180.40	11688.62	-349.93	-134.39	349.04	8.77
11783.00	45.49	179.43	11711.23	-371.12	-134.35	370.23	15.31

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
11815.00	49.67	179.35	11732.81	-394.74	-134.10	393.84	13.06
11847.00	53.19	179.61	11752.76	-419.76	-133.87	418.86	11.02
11878.00	57.54	180.93	11770.38	-445.25	-134.00	444.36	14.46
11909.00	61.27	182.25	11786.15	-471.92	-134.75	471.02	12.58
11941.00	65.41	182.07	11800.51	-500.49	-135.83	499.58	12.95
11972.00	70.15	180.93	11812.23	-529.17	-136.57	528.26	15.66
12004.00	74.68	180.14	11821.89	-559.67	-136.85	558.75	14.35
12035.00	77.41	180.05	11829.37	-589.75	-136.90	588.83	8.81
12083.00	79.91	180.66	11838.81	-636.81	-137.20	635.89	5.36
12130.00	83.47	181.54	11845.60	-683.30	-138.09	682.37	7.80
12224.00	88.62	179.87	11852.08	-777.03	-139.24	776.09	5.76
12254.00	89.19	179.35	11852.65	-807.03	-139.04	806.09	2.57
12348.00	89.19	178.82	11853.98	-901.01	-137.53	900.07	0.56
12442.00	89.01	177.94	11855.46	-994.95	-134.88	994.04	0.96
12537.00	89.19	177.76	11856.95	-1089.88	-131.31	1088.98	0.27
12631.00	90.46	180.05	11857.24	-1183.85	-129.52	1182.97	2.79
12726.00	92.00	179.87	11855.20	-1278.83	-129.45	1277.94	1.63
12820.00	89.67	180.58	11853.83	-1372.81	-129.82	1371.92	2.59
12915.00	93.32	180.66	11851.35	-1467.75	-130.85	1466.85	3.84
13010.00	92.31	179.43	11846.69	-1562.64	-130.92	1561.73	1.67
13104.00	90.20	178.91	11844.63	-1656.60	-129.56	1655.70	2.31
13199.00	87.91	179.87	11846.19	-1751.57	-128.55	1750.68	2.61
13294.00	88.13	179.87	11849.48	-1846.52	-128.33	1845.62	0.23
13389.00	89.49	179.17	11851.45	-1941.49	-127.54	1940.60	1.61
13483.00	87.78	179.87	11853.69	-2035.45	-126.75	2034.57	1.97
13577.00	88.22	179.17	11856.97	-2129.39	-125.96	2128.51	0.88
13670.00	88.88	178.03	11859.32	-2222.33	-123.69	2221.46	1.42
13765.00	89.89	179.35	11860.34	-2317.30	-121.52	2316.44	1.75
13858.00	89.45	180.75	11860.88	-2410.30	-121.60	2409.44	1.58
13953.00	85.05	182.69	11865.43	-2505.12	-124.45	2504.24	5.06
14048.00	87.60	181.19	11871.52	-2599.86	-127.65	2598.95	3.11
14142.00	90.07	180.93	11873.43	-2693.81	-129.39	2692.90	2.64
14241.00	89.45	180.31	11873.85	-2792.81	-130.46	2791.88	0.89
14335.00	90.29	179.96	11874.06	-2886.80	-130.68	2885.87	0.97
14431.00	90.59	179.26	11873.33	-2982.80	-130.03	2981.87	0.79
14525.00	91.74	178.64	11871.41	-3076.76	-128.31	3075.84	1.39
14620.00	90.51	179.70	11869.55	-3171.73	-126.93	3170.82	1.71
14714.00	90.55	178.82	11868.68	-3265.72	-125.72	3264.81	0.94
14807.00	91.16	176.97	11867.29	-3358.64	-122.30	3357.75	2.09
14901.00	90.02	177.15	11866.32	-3452.51	-117.48	3451.65	1.23
14996.00	89.27	178.82	11866.91	-3547.44	-114.14	3546.61	1.93
15091.00	90.07	177.06	11867.46	-3642.38	-110.73	3641.56	2.03
15185.00	89.32	178.82	11867.96	-3736.31	-107.35	3735.52	2.04
15279.00	89.27	180.58	11869.12	-3830.30	-106.86	3829.51	1.87
15374.00	90.81	179.87	11869.05	-3925.29	-107.23	3924.50	1.79
15468.00	92.48	178.73	11866.35	-4019.24	-106.08	4018.45	2.15
15563.00	90.46	179.08	11863.91	-4114.19	-104.27	4113.41	2.16
15657.00	90.33	181.37	11863.27	-4208.18	-104.64	4207.39	2.44
15752.00	90.15	181.19	11862.87	-4303.16	-106.76	4302.35	0.27
15849.00	89.38	180.98	11863.27	-4400.14	-108.60	4399.32	0.82

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
15943.00	90.43	180.07	11863.42	-4494.13	-109.46	4493.31	1.48
16038.00	91.42	177.58	11861.89	-4589.09	-107.51	4588.28	2.82
16132.00	90.93	175.09	11859.96	-4682.87	-101.50	4682.09	2.70
16227.00	91.48	174.50	11857.96	-4777.46	-92.89	4776.74	0.85
16321.00	91.54	175.36	11855.49	-4871.06	-84.58	4870.39	0.92
16415.00	91.94	178.85	11852.63	-4964.88	-79.84	4964.24	3.74
16509.00	90.06	181.05	11850.99	-5058.85	-79.76	5058.21	3.08
16604.00	90.31	181.85	11850.68	-5153.82	-82.16	5153.16	0.88
16698.00	90.00	182.56	11850.43	-5247.75	-85.78	5247.07	0.82
16793.00	89.07	183.54	11851.20	-5342.61	-90.83	5341.89	1.42
16888.00	89.51	185.15	11852.38	-5437.33	-98.03	5436.56	1.76
16982.00	89.01	183.67	11853.59	-5531.04	-105.25	5530.22	1.66
17077.00	89.20	182.02	11855.08	-5625.91	-109.97	5625.05	1.75
17172.00	88.95	181.09	11856.61	-5720.86	-112.55	5719.98	1.01
17267.00	90.12	179.45	11857.38	-5815.85	-112.99	5814.97	2.12
17361.00	90.25	178.33	11857.08	-5909.83	-111.17	5908.96	1.20
17455.00	90.00	177.94	11856.87	-6003.78	-108.11	6002.93	0.49
17549.00	90.12	177.63	11856.77	-6097.71	-104.48	6096.88	0.35
17644.00	90.06	176.12	11856.62	-6192.56	-99.30	6191.77	1.59
17738.00	90.00	174.44	11856.57	-6286.24	-91.57	6285.50	1.79
17833.00	90.00	175.79	11856.57	-6380.89	-83.48	6380.20	1.42
17927.00	90.06	178.03	11856.53	-6474.75	-78.41	6474.09	2.38
18021.00	89.75	178.67	11856.68	-6568.71	-75.70	6568.07	0.76
18115.00	89.01	180.92	11857.70	-6662.70	-75.37	6662.05	2.52
18210.00	88.40	180.52	11859.85	-6757.67	-76.56	6757.01	0.77
18304.00	88.89	181.78	11862.07	-6851.62	-78.45	6850.95	1.44
18399.00	89.94	182.29	11863.04	-6946.55	-81.82	6945.86	1.23
18494.00	89.57	181.40	11863.44	-7041.50	-84.88	7040.78	1.01
18589.00	90.19	180.47	11863.64	-7136.49	-86.43	7135.76	1.18
18684.00	90.74	178.68	11862.87	-7231.48	-85.73	7230.75	1.97
18779.00	90.19	177.78	11862.10	-7326.43	-82.79	7325.72	1.11
18873.00	89.94	176.40	11861.99	-7420.30	-78.02	7419.62	1.49
18968.00	89.75	177.14	11862.25	-7515.15	-72.67	7514.50	0.80
19062.00	90.49	177.57	11862.05	-7609.05	-68.33	7608.43	0.91
19157.00	89.88	179.71	11861.75	-7704.02	-66.07	7703.41	2.34
19251.00	90.26	182.03	11861.63	-7798.00	-67.50	7797.38	2.50
19345.00	90.62	183.90	11860.91	-7891.87	-72.36	7891.21	2.03
19439.00	89.57	182.96	11860.76	-7985.70	-77.99	7985.00	1.50
19534.00	89.75	183.26	11861.32	-8080.55	-83.14	8079.83	0.37
19628.00	89.08	180.58	11862.28	-8174.49	-86.29	8173.74	2.94
19722.00	89.44	178.94	11863.49	-8268.48	-85.90	8267.72	1.79
19817.00	89.44	177.95	11864.42	-8363.43	-83.32	8362.70	1.04
19912.00	90.37	177.75	11864.58	-8458.37	-79.75	8457.65	1.00
20007.00	90.74	178.95	11863.66	-8553.32	-77.02	8552.62	1.32
20102.00	90.12	180.27	11862.95	-8648.31	-76.37	8647.62	1.54
20196.00	90.43	179.91	11862.49	-8742.31	-76.52	8741.61	0.51
20290.00	90.43	179.45	11861.79	-8836.31	-76.00	8835.61	0.49
20385.00	90.93	180.50	11860.66	-8931.30	-75.95	8930.60	1.22
20479.00	88.33	180.26	11861.27	-9025.29	-76.58	9024.58	2.78
20573.00	88.58	180.27	11863.80	-9119.25	-77.01	9118.54	0.27

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
20668.00	87.96	179.85	11866.67	-9214.21	-77.11	9213.49	0.79
20762.00	90.31	181.06	11868.09	-9308.19	-77.86	9307.46	2.81
20856.00	91.05	180.89	11866.97	-9402.17	-79.46	9401.43	0.81
20951.00	91.36	180.81	11864.98	-9497.13	-80.87	9496.39	0.34
21045.00	90.99	180.75	11863.05	-9591.10	-82.15	9590.35	0.40
21140.00	90.99	181.68	11861.41	-9686.07	-84.16	9685.30	0.98
21235.00	90.97	180.79	11859.78	-9781.03	-86.21	9780.24	0.94
21330.00	90.99	178.97	11858.16	-9876.01	-86.01	9875.23	1.92
21424.00	91.36	178.61	11856.23	-9969.97	-84.02	9969.20	0.55
21519.00	89.94	177.67	11855.15	-10064.91	-80.94	10064.15	1.79
21613.00	89.51	177.19	11855.60	-10158.82	-76.73	10158.08	0.69
21708.00	89.32	177.36	11856.57	-10253.70	-72.21	10253.00	0.27
21803.00	89.75	177.65	11857.34	-10348.61	-68.07	10347.93	0.55
21897.00	89.51	178.84	11857.95	-10442.56	-65.20	10441.90	1.29
21992.00	89.45	180.35	11858.81	-10537.55	-64.52	10536.89	1.59
22086.00	89.32	180.59	11859.82	-10631.54	-65.29	10630.88	0.29
22180.00	89.01	177.84	11861.19	-10725.52	-64.01	10724.86	2.94
22275.00	90.80	177.80	11861.35	-10820.44	-60.39	10819.81	1.88
22370.00	90.25	178.75	11860.48	-10915.40	-57.53	10914.77	1.16
22464.00	90.49	181.02	11859.87	-11009.39	-57.35	11008.76	2.43
22559.00	90.37	181.77	11859.16	-11104.36	-59.66	11103.72	0.80
22654.00	90.80	183.15	11858.19	-11199.26	-63.74	11198.59	1.52
22748.00	90.68	182.56	11856.98	-11293.14	-68.42	11292.43	0.64
22843.00	90.74	181.14	11855.80	-11388.08	-71.48	11387.35	1.50
22938.00	89.88	181.59	11855.28	-11483.05	-73.75	11482.31	1.02
23033.00	90.18	182.03	11855.24	-11578.00	-76.75	11577.24	0.56
23127.00	89.57	181.68	11855.44	-11671.95	-79.79	11671.16	0.75
23221.00	89.51	180.93	11856.19	-11765.92	-81.93	11765.12	0.80
23316.00	89.51	178.75	11857.01	-11860.91	-81.67	11860.11	2.29
23410.00	89.14	175.54	11858.12	-11954.78	-76.98	11954.00	3.44
23504.00	90.26	176.74	11858.61	-12048.56	-70.66	12047.82	1.75
23599.00	89.81	177.63	11858.55	-12143.44	-65.99	12142.74	1.05
23693.00	91.15	178.50	11857.76	-12237.38	-62.82	12236.70	1.70
23788.00	91.30	181.41	11855.73	-12332.35	-62.74	12331.66	3.07
23883.00	90.00	179.38	11854.65	-12427.34	-63.40	12426.64	2.54
23978.00	91.05	178.38	11853.78	-12522.31	-61.54	12521.63	1.53
24074.00	91.23	178.52	11851.87	-12618.26	-58.94	12617.59	0.24
24168.00	91.17	179.61	11849.90	-12712.22	-57.41	12711.56	1.16
24263.00	87.78	180.01	11850.77	-12807.20	-57.10	12806.54	3.59
24358.00	88.85	179.73	11853.57	-12902.16	-56.88	12901.50	1.16
24452.00	88.52	178.45	11855.72	-12996.12	-55.39	12995.47	1.41
24547.00	89.81	180.08	11857.11	-13091.10	-54.17	13090.45	2.19
24642.00	87.59	181.27	11859.26	-13186.06	-55.29	13185.40	2.65
24736.00	92.20	183.79	11859.44	-13279.94	-59.44	13279.25	5.59
24798.00	92.47	186.45	11856.91	-13341.63	-64.96	13340.91	4.31

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
Projected to Total Depth:							
24830.00	92.47	186.45	11855.53	-13373.40	-68.56	13372.65	0.00

* Wellbenders surveys from 100.00 ft MD to 15,752.00 ft MD *

* Weatherford surveys from 15,849.00 ft MD to 24,798.00 ft MD *

* TD at 24830 ft MD *

* The total correction is 6.61 deg relative to Grid North *