



MAR 1 8 2019

DISTRICT II-ARTESIA O.C.D.

5D Survey Report

XTO Energy

Field Name: *Eddy Co., NM (NAD 27 NME)*

Site Name: *Poker Lake Unit*

Well Name: *Poker Lake Unit 486Y*

File number: *13460752*

Survey: *Definitive survey*

17 October 2018





Poker Lake Unit 486Y

Field Name:	Map Units: US ft		Company Name: XTO Energy	
Eddy Co., NM (NAD 27 NME)	Vertical Reference Datum (VRD): Mean Sea Level			
	Projected Coordinate System: NAD27 / New Mexico East			
	Comment:			
Site:	Units: US ft	North Reference: Grid	Convergence Angle: 0.25	
	Position:	Northing: 430231.30 US ft	Latitude: 32.181925271	
		Easting: 647423.90 US ft	Longitude: -103.856823370	
Poker Lake Unit	Elevation above MSL: 3340.00 US ft		Comment: Eddy Co., New Mexico	
Slot:	Position (Relative to Site Centre)			
	+N/-S: 0.00 US ft	Northing: 430231.30 US ft	Latitude: 32.181925271	
	+E/-W: 0.00 US ft	Easting: 647423.90 US ft	Longitude: -103.856823370	
	Elevation above MSL: 3340.00 US ft			
Poker Lake Unit 486Y	Comment:			
Well:	Type: Main well		UWI:	
	File Number:	Comment: Patterson		
	13460752	225 (26'KB)		
	Closure Distance: 9857.14 US ft		Closure Azimuth: 270.48°	
	Vertical Section: Position of Origin (Relative to Slot centre)			
Poker Lake Unit 486Y	+N/-S: 0.00 US ft	+E/-W: -0.00 US ft	Az: 270.23°	

Drill floor: Survey Name: Definitive Survey

Rig Height (Well TVD Reference): Elevation above MSL: 3366.00 US ft **Inclination:** 0.00° **Azimuth:** 0.00°
26.00 US ft

Survey Name: Definitive Survey

Date: 10/Oct/2018 **Survey Tool:** See Survey **Comment:** **Company:**
Tool Ranges below.

Magnetic Model:

Model Name: **Date:** 07/Oct/2018 **Field Strength:** **Declination:** 7.02° **Dip:** 59.91°
bggm2018 47792.2 nT

Tie Point:

MD: 0.00 US ft **Inclination:** 0.00° **Azimuth:** 0.00° **TVD:** 0.00 US ft **North Offset:** 0.00 US ft **East Offset:** -0.00 US ft

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Survey Tool Ranges:			
Name	Start MD(USFt)	End MD(USFt)	Source Survey
MWD	0.00	11281.00	WellBenders MWD
MWD	11281.00	18796.00	MS Guidance MWD
MWD	18796.00	19344.00	MWD 1
MWD	19344.00	21561.00	MWD 2

Wellpath created using minimum curvature.

Survey Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.00	430231.30	647423.90	
26.00	0.00	0.00	26.00	0.00	0.00	-0.00	0.00	430231.30	647423.90	
121.00	0.50	176.80	121.00	-0.02	-0.41	0.02	0.53	430230.89	647423.92	
205.00	1.00	42.30	204.99	-0.54	-0.24	0.54	1.66	430231.06	647424.44	
290.00	0.80	35.60	289.98	-1.38	0.79	1.38	0.27	430232.09	647425.28	
379.00	0.90	48.90	378.97	-2.26	1.76	2.27	0.25	430233.06	647426.17	
466.00	0.90	34.30	465.96	-3.16	2.77	3.17	0.26	430234.07	647427.07	
552.00	1.10	12.10	551.95	-3.71	4.14	3.72	0.50	430235.44	647427.62	
647.00	1.70	18.90	646.92	-4.35	6.36	4.37	0.65	430237.66	647428.27	
739.00	1.70	14.10	738.88	-5.11	8.98	5.15	0.15	430240.28	647429.05	
863.00	1.70	1.50	862.83	-5.59	12.60	5.64	0.30	430243.90	647429.54	
962.00	1.70	302.50	961.79	-4.38	14.86	4.44	1.69	430246.16	647428.34	
1052.00	1.40	322.60	1051.76	-2.58	16.45	2.65	0.68	430247.75	647426.55	
1071.00	1.50	325.40	1070.75	-2.30	16.84	2.37	0.64	430248.14	647426.27	
1161.00	1.80	327.50	1160.72	-0.86	19.00	0.94	0.34	430250.30	647424.84	
1256.00	2.00	328.80	1255.66	0.81	21.67	-0.72	0.22	430252.97	647423.18	
1350.00	2.10	332.60	1349.60	2.46	24.61	-2.37	0.18	430255.91	647421.53	
1444.00	2.00	333.10	1443.54	4.01	27.60	-3.90	0.11	430258.90	647420.00	
1540.00	2.20	332.90	1539.48	5.62	30.73	-5.50	0.21	430262.03	647418.40	
1635.00	2.20	334.40	1634.41	7.25	34.00	-7.12	0.06	430265.30	647416.78	
1732.00	2.40	334.30	1731.33	8.95	37.51	-8.80	0.21	430268.81	647415.10	
1826.00	2.50	335.40	1825.24	10.67	41.15	-10.51	0.12	430272.45	647413.39	
1921.00	2.40	336.70	1920.16	12.34	44.86	-12.16	0.12	430276.16	647411.74	
2016.00	2.60	335.50	2015.07	14.03	48.64	-13.84	0.22	430279.94	647410.06	
2111.00	2.80	335.80	2109.96	15.89	52.72	-15.68	0.21	430284.02	647408.22	
2206.00	2.70	336.70	2204.85	17.75	56.89	-17.52	0.11	430288.19	647406.38	
2298.00	2.80	336.50	2296.75	19.52	60.94	-19.27	0.11	430292.24	647404.63	
2392.00	2.90	336.40	2390.63	21.40	65.23	-21.14	0.11	430296.53	647402.76	
2485.00	2.10	337.30	2483.54	23.02	68.96	-22.74	0.86	430300.26	647401.16	
2583.00	1.30	349.80	2581.50	23.92	71.71	-23.63	0.90	430303.01	647400.27	
2677.00	1.20	354.40	2675.47	24.21	73.74	-23.91	0.15	430305.04	647399.99	
2771.00	1.30	356.40	2769.45	24.38	75.78	-24.08	0.12	430307.08	647399.82	
2866.00	1.30	359.50	2864.43	24.47	77.93	-24.15	0.07	430309.23	647399.75	
2954.00	1.40	2.30	2952.40	24.44	80.01	-24.12	0.14	430311.31	647399.78	
3054.00	1.40	3.70	3052.37	24.32	82.45	-23.99	0.03	430313.75	647399.91	
3148.00	1.50	3.80	3146.34	24.18	84.82	-23.84	0.11	430316.12	647400.06	
3241.00	1.60	8.10	3239.31	23.92	87.32	-23.57	0.16	430318.62	647400.33	
3339.00	1.50	17.80	3337.27	23.35	89.89	-22.99	0.29	430321.19	647400.91	
3434.00	1.60	21.90	3432.24	22.48	92.31	-22.11	0.16	430323.61	647401.79	
3528.00	1.70	23.00	3526.20	21.46	94.81	-21.08	0.11	430326.11	647402.82	
3623.00	1.80	26.10	3621.16	20.26	97.45	-19.87	0.14	430328.75	647404.03	
3717.00	1.80	29.70	3715.11	18.89	100.06	-18.49	0.12	430331.36	647405.41	
3812.00	1.80	30.70	3810.06	17.40	102.63	-16.99	0.03	430333.93	647406.91	
3839.00	1.80	30.40	3837.05	16.97	103.36	-16.56	0.03	430334.66	647407.34	
3976.00	2.00	334.10	3973.98	16.94	107.37	-16.51	1.31	430338.67	647407.39	
4016.00	1.90	27.00	4013.96	16.95	108.59	-16.52	4.35	430339.89	647407.38	
4110.00	2.10	27.00	4107.91	15.48	111.51	-15.03	0.21	430342.81	647408.87	
4205.00	2.10	27.50	4202.84	13.89	114.61	-13.43	0.02	430345.91	647410.47	
4299.00	2.20	24.70	4296.78	12.36	117.77	-11.88	0.15	430349.07	647412.02	

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Survey Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
4394.00	2.30	23.40	4391.70	10.85	121.18	-10.37	0.12	430352.48	647413.53	
4488.00	2.20	22.80	4485.63	9.42	124.57	-8.92	0.11	430355.87	647414.98	
4583.00	2.20	20.60	4580.56	8.08	127.96	-7.57	0.09	430359.26	647416.33	
4678.00	2.30	18.60	4675.49	6.85	131.48	-6.32	0.13	430362.78	647417.58	
4772.00	2.50	17.90	4769.41	5.63	135.21	-5.09	0.22	430366.51	647418.81	
4867.00	2.40	17.90	4864.32	4.40	139.08	-3.84	0.11	430370.38	647420.06	
4961.00	2.20	16.60	4958.24	3.29	142.68	-2.72	0.22	430373.98	647421.18	
5056.00	2.30	15.90	5053.17	2.26	146.26	-1.68	0.11	430377.56	647422.22	
5137.00	2.20	14.80	5134.11	1.43	149.33	-0.83	0.13	430380.63	647423.07	
5232.00	2.40	16.60	5229.03	0.41	153.00	0.20	0.22	430384.30	647424.10	
5326.00	2.30	11.10	5322.95	-0.50	156.73	1.13	0.26	430388.03	647425.03	
5421.00	2.20	6.20	5417.88	-1.05	160.42	1.69	0.23	430391.72	647425.59	
5515.00	2.10	0.50	5511.81	-1.24	163.93	1.90	0.25	430395.23	647425.80	
5610.00	2.00	1.80	5606.75	-1.30	167.33	1.97	0.12	430398.63	647425.87	
5704.00	1.90	2.50	5700.70	-1.40	170.53	2.09	0.11	430401.83	647425.99	
5799.00	1.90	3.00	5795.65	-1.54	173.67	2.24	0.02	430404.97	647426.14	
5894.00	1.70	2.60	5890.60	-1.67	176.65	2.38	0.21	430407.95	647426.28	
5989.00	1.60	4.10	5985.56	-1.82	179.38	2.54	0.11	430410.68	647426.44	
6083.00	1.50	4.40	6079.52	-2.00	181.92	2.73	0.11	430413.22	647426.63	
6155.00	1.50	353.70	6151.50	-1.96	183.80	2.70	0.39	430415.10	647426.60	
6271.00	1.40	344.10	6267.46	-1.40	186.67	2.14	0.23	430417.97	647426.04	
6366.00	1.20	330.40	6362.44	-0.58	188.65	1.34	0.39	430419.95	647425.24	
6461.00	1.20	318.50	6457.42	0.58	190.26	0.18	0.26	430421.56	647424.08	
6555.00	1.20	308.40	6551.40	2.01	191.61	-1.24	0.22	430422.91	647422.66	
6649.00	1.30	295.20	6645.38	3.75	192.67	-2.97	0.32	430423.97	647420.93	
6743.00	1.30	291.70	6739.35	5.71	193.52	-4.93	0.08	430424.82	647418.97	
6838.00	1.40	293.40	6834.33	7.78	194.38	-7.00	0.11	430425.68	647416.90	
6933.00	1.50	285.90	6929.29	10.04	195.18	-9.26	0.23	430426.48	647414.64	
7027.00	1.60	279.50	7023.26	12.52	195.74	-11.74	0.21	430427.04	647412.16	
7121.00	1.80	268.70	7117.22	15.29	195.92	-14.51	0.40	430427.22	647409.39	
7216.00	1.70	261.20	7212.17	18.18	195.67	-17.39	0.26	430426.97	647406.51	
7310.00	1.80	254.30	7306.13	20.97	195.06	-20.19	0.25	430426.36	647403.71	
7401.00	1.30	263.40	7397.10	23.37	194.55	-22.59	0.61	430425.85	647401.31	
7499.00	1.30	275.20	7495.07	25.58	194.52	-24.80	0.27	430425.82	647399.10	
7593.00	1.10	278.70	7589.05	27.54	194.76	-26.76	0.23	430426.06	647397.14	
7688.00	0.90	317.60	7684.04	28.94	195.45	-28.16	0.73	430426.75	647395.74	
7790.00	0.80	298.60	7786.03	30.11	196.38	-29.33	0.29	430427.68	647394.57	
7882.00	1.00	303.00	7878.02	31.35	197.12	-30.56	0.23	430428.42	647393.34	
7978.00	0.90	303.50	7974.00	32.69	198.00	-31.89	0.10	430429.30	647392.01	
8071.00	0.90	301.20	8066.99	33.93	198.78	-33.13	0.04	430430.08	647390.77	
8166.00	1.10	296.30	8161.98	35.38	199.57	-34.58	0.23	430430.87	647389.32	
8263.00	1.40	294.30	8258.95	37.30	200.47	-36.50	0.31	430431.77	647387.40	
8357.00	2.00	280.90	8352.91	39.96	201.25	-39.16	0.76	430432.55	647384.74	
8451.00	2.10	272.80	8446.85	43.30	201.65	-42.49	0.33	430432.95	647381.41	
8546.00	2.00	267.30	8541.79	46.69	201.65	-45.88	0.23	430432.95	647378.02	
8640.00	2.50	257.00	8635.72	50.32	201.11	-49.52	0.68	430432.41	647374.38	
8734.00	2.60	251.20	8729.63	54.33	199.97	-53.53	0.29	430431.27	647370.37	
8828.00	2.70	248.70	8823.53	58.41	198.47	-57.61	0.16	430429.77	647366.29	
8921.00	2.60	244.10	8916.43	62.34	196.76	-61.55	0.25	430428.06	647362.35	
9018.00	2.50	247.50	9013.33	66.27	194.99	-65.49	0.19	430426.29	647358.41	
9049.00	2.20	246.80	9044.30	67.44	194.49	-66.66	0.97	430425.79	647357.24	
9080.00	2.00	245.20	9075.28	68.47	194.03	-67.69	0.67	430425.33	647356.21	
9110.00	1.80	244.70	9105.27	69.37	193.61	-68.60	0.67	430424.91	647355.30	
9143.00	1.80	248.30	9138.25	70.32	193.20	-69.55	0.34	430424.50	647354.35	
9204.00	2.10	259.80	9199.22	72.31	192.65	-71.54	0.81	430423.95	647352.36	
9237.00	2.10	262.30	9232.19	73.50	192.46	-72.73	0.28	430423.76	647351.17	
9268.00	2.20	264.70	9263.17	74.66	192.33	-73.89	0.43	430423.63	647350.01	
9298.00	2.40	276.60	9293.15	75.85	192.35	-75.08	1.72	430423.65	647348.82	
9331.00	2.60	272.60	9326.12	77.29	192.46	-76.52	0.80	430423.76	647347.38	

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Survey Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
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9393.00	2.60	278.40	9388.05	80.09	192.73	-79.31	0.42	430424.03	647344.59	
9433.00	2.40	273.60	9428.01	81.82	192.91	-81.05	0.72	430424.21	647342.85	
9496.00	2.10	263.40	9490.97	84.28	192.86	-83.51	0.79	430424.16	647340.39	
9519.00	2.20	258.10	9513.95	85.13	192.72	-84.36	0.97	430424.02	647339.54	
9581.00	2.30	243.40	9575.90	87.41	191.92	-86.64	0.94	430423.22	647337.26	
9615.00	2.10	236.00	9609.88	88.53	191.27	-87.76	1.02	430422.57	647336.14	
9625.00	1.80	229.70	9619.87	88.80	191.06	-88.04	3.68	430422.36	647335.86	
9674.00	1.60	213.50	9668.85	89.76	190.00	-89.00	1.06	430421.30	647334.90	
9722.00	1.40	200.90	9716.83	90.34	188.89	-89.58	0.80	430420.19	647334.32	
9767.00	1.20	191.70	9761.82	90.62	187.91	-89.87	0.64	430419.21	647334.03	
9862.00	1.20	189.10	9856.80	90.98	185.96	-90.23	0.06	430417.26	647333.67	
9958.00	1.20	200.70	9952.78	91.48	184.02	-90.74	0.25	430415.32	647333.16	
10053.00	1.30	195.40	10047.76	92.11	182.06	-91.38	0.16	430413.36	647332.52	
10147.00	1.80	202.00	10141.72	92.94	179.66	-92.22	0.56	430410.96	647331.68	
10210.00	1.80	212.20	10204.69	93.83	177.90	-93.12	0.51	430409.20	647330.78	
10240.00	1.90	211.90	10234.68	94.34	177.08	-93.63	0.33	430408.38	647330.27	
10334.00	1.80	217.10	10328.63	96.04	174.58	-95.34	0.21	430405.88	647328.56	
10429.00	1.70	218.20	10423.58	97.81	172.28	-97.12	0.11	430403.58	647326.78	
10525.00	1.70	220.10	10519.54	99.59	170.08	-98.91	0.06	430401.38	647324.99	
10620.00	1.80	226.40	10614.50	101.57	167.97	-100.90	0.23	430399.27	647323.00	
10715.00	1.90	229.60	10709.45	103.85	165.92	-103.18	0.15	430397.22	647320.72	
10809.00	2.10	231.20	10803.39	106.37	163.83	-105.71	0.22	430395.13	647318.19	
10902.00	2.10	231.40	10896.33	109.02	161.70	-108.37	0.01	430393.00	647315.53	
10997.00	2.00	233.30	10991.27	111.70	159.62	-111.06	0.13	430390.92	647312.84	
11090.00	2.00	234.60	11084.21	114.32	157.71	-113.68	0.05	430389.01	647310.22	
11187.00	2.10	231.50	11181.15	117.08	155.63	-116.45	0.15	430386.93	647307.45	
11281.00	2.00	229.40	11275.09	119.66	153.49	-119.05	0.13	430384.79	647304.85	
11359.00	1.80	227.90	11353.05	121.60	151.78	-120.99	0.26	430383.08	647302.91	
11418.00	1.80	230.50	11412.02	123.00	150.57	-122.39	0.14	430381.87	647301.51	
11463.00	3.30	260.00	11456.97	124.81	149.90	-124.21	4.33	430381.20	647299.69	
11513.00	9.80	270.90	11506.62	130.49	149.71	-129.89	13.18	430381.01	647294.01	
11558.00	14.90	277.80	11550.57	140.06	150.56	-139.46	11.78	430381.86	647284.44	
11607.00	19.30	278.80	11597.39	154.32	152.65	-153.71	9.00	430383.95	647270.19	
11652.00	22.80	278.60	11639.38	170.31	155.10	-169.68	7.78	430386.40	647254.22	
11699.00	24.70	279.00	11682.40	189.02	157.99	-188.39	4.06	430389.29	647235.51	
11746.00	25.90	278.40	11724.89	208.89	161.03	-208.24	2.61	430392.33	647215.66	
11793.00	29.20	279.10	11766.55	230.38	164.34	-229.73	7.05	430395.64	647194.17	
11841.00	33.60	274.60	11807.52	255.21	167.26	-254.54	10.38	430398.56	647169.36	
11888.00	38.20	274.20	11845.58	282.69	169.37	-282.01	9.80	430400.67	647141.89	
11935.00	43.20	274.30	11881.20	313.25	171.64	-312.57	10.64	430402.94	647111.33	
11982.00	49.10	274.90	11913.75	347.03	174.37	-346.34	12.59	430405.67	647077.56	
12030.00	53.70	274.30	11943.69	384.43	177.37	-383.72	9.63	430408.67	647040.18	
12077.00	56.60	273.60	11970.54	422.91	180.02	-422.19	6.29	430411.32	647001.71	
12124.00	58.80	271.80	11995.66	462.60	181.89	-461.87	5.69	430413.19	646962.03	
12171.00	61.00	271.20	12019.23	503.25	182.95	-502.52	4.81	430414.25	646921.38	
12218.00	63.80	270.20	12041.00	544.89	183.45	-544.16	6.25	430414.75	646879.74	
12265.00	66.00	270.00	12060.94	587.45	183.52	-586.72	4.70	430414.82	646837.18	
12313.00	68.30	269.30	12079.57	631.68	183.25	-630.95	4.98	430414.55	646792.95	
12360.00	72.30	268.70	12095.41	675.91	182.48	-675.18	8.60	430413.78	646748.72	
12407.00	79.00	269.40	12107.06	721.41	181.73	-720.68	14.33	430413.03	646703.22	
12454.00	86.30	271.60	12113.07	767.99	182.14	-767.26	16.21	430413.44	646656.64	
12572.00	92.80	272.30	12113.99	885.86	186.15	-885.12	5.54	430417.45	646538.78	
12666.00	90.90	270.90	12110.96	979.78	188.78	-979.03	2.51	430420.08	646444.87	
12761.00	90.80	270.20	12109.55	1074.77	189.69	-1074.02	0.74	430420.99	646349.88	
12855.00	92.30	268.80	12107.01	1168.72	188.87	-1167.97	2.18	430420.17	646255.93	
12949.00	88.00	267.60	12106.76	1262.64	185.92	-1261.90	4.75	430417.22	646162.00	
13044.00	87.50	267.70	12110.49	1357.47	182.02	-1356.75	0.54	430413.32	646067.15	
13139.00	86.40	266.80	12115.54	1452.20	177.47	-1451.50	1.50	430408.77	645972.40	
13234.00	92.60	267.70	12116.37	1547.02	172.92	-1546.34	6.59	430404.22	645877.56	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N. Offset (US ft)	E. Offset (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
13328.00	93.20	264.80	12111.62	1640.67	166.78	-1640.01	3.15	430398.08	645783.89	
13422.00	94.20	265.50	12105.55	1734.10	158.85	-1733.48	1.30	430390.15	645690.42	
13517.00	94.20	269.30	12098.59	1828.71	154.55	-1828.11	3.99	430385.85	645595.79	
13612.00	95.60	269.20	12090.48	1923.35	153.31	-1922.75	1.48	430384.61	645501.15	
13706.00	95.60	270.60	12081.30	2016.90	153.15	-2016.30	1.48	430384.45	645407.60	
13801.00	91.50	271.10	12075.42	2111.69	154.56	-2111.09	4.35	430385.86	645312.81	
13895.00	89.60	271.20	12074.52	2205.67	156.44	-2205.06	2.02	430387.74	645218.84	
13990.00	90.20	271.20	12074.68	2300.65	158.43	-2300.04	0.63	430389.73	645123.86	
14084.00	94.60	272.30	12070.75	2394.51	161.30	-2393.89	4.82	430392.60	645030.01	
14179.00	95.40	271.90	12062.47	2489.10	164.77	-2488.46	0.94	430396.07	644935.44	
14270.00	96.50	270.80	12053.04	2579.59	166.90	-2578.94	1.70	430398.20	644844.96	
14364.00	89.20	268.50	12048.36	2673.40	166.32	-2672.75	8.14	430397.62	644751.15	
14459.00	91.00	267.90	12048.20	2768.34	163.34	-2767.70	2.00	430394.64	644656.20	
14553.00	92.30	268.10	12045.49	2862.22	160.06	-2861.60	1.40	430391.36	644562.30	
14647.00	91.10	268.30	12042.70	2956.12	157.11	-2955.51	1.29	430388.41	644468.39	
14741.00	91.70	268.90	12040.41	3050.05	154.81	-3049.46	0.90	430386.11	644374.44	
14835.00	91.50	270.70	12037.78	3144.01	154.48	-3143.42	1.93	430385.78	644280.48	
14932.00	92.40	271.50	12034.48	3240.94	156.34	-3240.34	1.24	430387.64	644183.56	
15026.00	92.20	271.00	12030.71	3334.85	158.39	-3334.24	0.57	430389.69	644089.66	
15121.00	89.90	268.70	12028.97	3429.82	158.14	-3429.21	3.42	430389.44	643994.69	
15214.00	92.70	268.60	12026.86	3522.75	155.95	-3522.15	3.01	430387.25	643901.75	
15308.00	92.10	268.40	12022.92	3616.63	153.49	-3616.04	0.67	430384.79	643807.86	
15402.00	91.60	268.30	12019.89	3710.53	150.79	-3709.95	0.54	430382.09	643713.95	
15497.00	92.70	267.50	12016.32	3805.38	147.31	-3804.82	1.43	430378.61	643619.08	
15590.00	92.70	268.30	12011.94	3898.20	143.91	-3897.65	0.86	430375.21	643526.25	
15684.00	92.70	267.70	12007.51	3992.02	140.63	-3991.49	0.64	430371.93	643432.41	
15777.00	93.00	267.10	12002.89	4084.79	136.42	-4084.28	0.72	430367.72	643339.62	
15871.00	89.30	267.10	12001.00	4178.62	131.66	-4178.12	3.94	430362.96	643245.78	
15967.00	89.10	268.70	12002.34	4274.53	128.15	-4274.05	1.68	430359.45	643149.85	
16061.00	91.80	268.30	12001.61	4368.47	125.68	-4368.00	2.90	430356.98	643055.90	
16155.00	94.10	269.10	11996.77	4462.31	123.55	-4461.85	2.59	430354.85	642962.05	
16249.00	93.30	268.60	11990.70	4556.08	121.67	-4555.63	1.00	430352.97	642868.27	
16343.00	94.50	268.70	11984.31	4649.83	119.46	-4649.38	1.28	430350.76	642774.52	
16437.00	94.00	268.30	11977.34	4743.53	117.01	-4743.09	0.68	430348.31	642680.81	
16530.00	95.00	268.30	11970.05	4836.18	114.26	-4835.76	1.08	430345.56	642588.14	
16624.00	92.70	267.90	11963.74	4929.90	111.15	-4929.49	2.48	430342.45	642494.41	
16718.00	88.60	267.00	11962.67	5023.76	106.97	-5023.37	4.47	430338.27	642400.53	
16811.00	89.80	267.10	11963.97	5116.61	102.18	-5116.24	1.29	430333.48	642307.66	
16906.00	91.30	267.20	11963.06	5211.47	97.46	-5211.12	1.58	430328.76	642212.78	
17000.00	92.20	267.30	11960.19	5305.29	92.95	-5304.96	0.96	430324.25	642118.94	
17095.00	88.70	267.90	11959.44	5400.18	88.97	-5399.86	3.74	430320.27	642024.04	
17189.00	92.20	269.60	11958.70	5494.12	86.92	-5493.82	4.14	430318.22	641930.08	
17282.00	88.90	269.80	11957.81	5587.10	86.44	-5586.80	3.55	430317.74	641837.10	
17378.00	90.80	272.70	11958.06	5683.07	88.53	-5682.76	3.61	430319.83	641741.14	
17472.00	89.90	271.80	11957.49	5777.01	92.22	-5776.69	1.35	430323.52	641647.21	
17566.00	90.50	271.20	11957.16	5870.98	94.68	-5870.65	0.90	430325.98	641553.25	
17666.00	88.20	270.00	11958.29	5970.97	95.73	-5970.63	2.59	430327.03	641453.27	
17755.00	89.10	269.90	11960.39	6059.94	95.65	-6059.61	1.02	430326.95	641364.29	
17849.00	88.70	269.80	11962.19	6153.92	95.40	-6153.59	0.44	430326.70	641270.31	
17944.00	89.90	270.60	11963.35	6248.91	95.74	-6248.58	1.52	430327.04	641175.32	
18039.00	90.90	270.70	11962.69	6343.91	96.81	-6343.57	1.06	430328.11	641080.33	
18133.00	91.40	270.90	11960.80	6437.88	98.13	-6437.54	0.57	430329.43	640986.36	
18228.00	91.80	270.30	11958.15	6532.84	99.12	-6532.50	0.76	430330.42	640891.40	
18324.00	94.00	270.30	11953.29	6628.71	99.62	-6628.37	2.29	430330.92	640795.53	
18418.00	94.30	270.40	11946.49	6722.47	100.19	-6722.12	0.34	430331.49	640701.78	
18513.00	95.40	270.00	11938.46	6817.12	100.53	-6816.78	1.23	430331.83	640607.12	
18607.00	95.80	269.80	11929.29	6910.67	100.36	-6910.33	0.48	430331.66	640513.57	
18702.00	97.30	269.60	11918.45	7005.05	99.87	-7004.70	1.59	430331.17	640419.20	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N. Offset (US ft)	E. Offset (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
18796.00	98.60	268.20	11905.45	7098.11	98.08	-7097.78	2.02	430329.38	640326.12	Tie on MS Guidance MWD
18874.00	98.18	267.73	11894.07	7175.22	95.34	-7174.89	0.80	430326.64	640249.01	First WFT MWD Svy
18968.00	92.84	269.50	11885.05	7268.71	93.09	-7268.40	5.98	430324.39	640155.50	
19062.00	87.78	269.72	11884.54	7362.67	92.45	-7362.36	5.39	430323.75	640061.54	
19156.00	85.74	269.91	11889.85	7456.51	92.15	-7456.21	2.18	430323.45	639967.69	
19250.00	84.01	269.33	11898.25	7550.13	91.53	-7549.82	1.94	430322.83	639874.08	
19344.00	82.58	269.09	11909.22	7643.47	90.24	-7643.17	1.54	430321.54	639780.73	
19440.00	83.33	269.07	11921.00	7738.73	88.71	-7738.43	0.78	430320.01	639685.47	
19533.00	86.67	268.90	11929.10	7831.34	87.07	-7831.05	3.60	430318.37	639592.85	
19627.00	89.32	268.85	11932.39	7925.24	85.22	-7924.97	2.82	430316.52	639498.93	
19721.00	91.54	268.57	11931.68	8019.20	83.11	-8018.93	2.38	430314.41	639404.97	
19814.00	91.73	269.28	11929.03	8112.14	81.36	-8111.88	0.79	430312.66	639312.02	
19909.00	92.78	269.23	11925.29	8207.05	80.13	-8206.80	1.11	430311.43	639217.10	
20004.00	92.47	269.81	11920.94	8301.94	79.33	-8301.69	0.69	430310.63	639122.21	
20098.00	90.18	266.94	11918.77	8395.85	76.67	-8395.61	3.91	430307.97	639028.29	
20193.00	90.68	267.04	11918.05	8490.70	71.68	-8490.48	0.54	430302.98	638933.42	
20287.00	91.23	268.60	11916.49	8584.60	68.10	-8584.39	1.76	430299.40	638839.51	
20382.00	92.28	271.55	11913.58	8679.54	68.23	-8679.34	3.29	430299.53	638744.56	
20477.00	91.66	272.36	11910.31	8774.44	71.47	-8774.23	1.07	430302.77	638649.67	
20571.00	93.02	270.58	11906.47	8868.34	73.88	-8868.11	2.38	430305.18	638555.79	
20666.00	92.65	269.56	11901.77	8963.22	73.99	-8962.99	1.14	430305.29	638460.91	
20761.00	90.43	267.94	11899.22	9058.14	71.92	-9057.93	2.89	430303.22	638365.97	
20855.00	91.36	268.42	11897.75	9152.07	68.94	-9151.87	1.11	430300.24	638272.03	
20950.00	90.86	269.08	11895.91	9247.02	66.86	-9246.82	0.87	430298.16	638177.08	
21044.00	93.95	270.49	11891.97	9340.92	66.51	-9340.73	3.61	430297.81	638083.17	
21139.00	94.50	271.67	11884.97	9435.65	68.30	-9435.45	1.37	430299.60	637988.45	
21233.00	91.60	271.51	11879.97	9529.48	70.90	-9529.27	3.09	430302.20	637894.63	
21326.00	91.91	272.23	11877.12	9622.40	73.93	-9622.18	0.84	430305.23	637801.72	
21420.00	93.70	273.46	11872.52	9716.18	78.59	-9715.94	2.31	430309.89	637707.96	
21515.00	88.58	271.12	11870.63	9811.06	82.38	-9810.81	5.93	430313.68	637613.09	Last WFT MWD Svy
21561.00	88.58	271.12	11871.77	9857.04	83.28	-9856.79	0.00	430314.58	637567.11	TD @ 21561' / PTB