

30-025-43741

Weatherford®

Evaluation, Drilling & Intervention
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XTO Energy
 200 N Loraine, Ste 800
 Midland, TX 79701

Date: December 18, 2017

HOBBS OCD**JUN 11 2018****RECEIVED**

Attention: Matthew Naehar

Re: XTO Energy
 Well: Espejo Federal Cm 1H
 Lea County, New Mexico

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>
Brice Tamdjo MWD Supervisor	1H	4062 MD 16078 MD	12/2/2017 12/15/2017	Measurement 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.

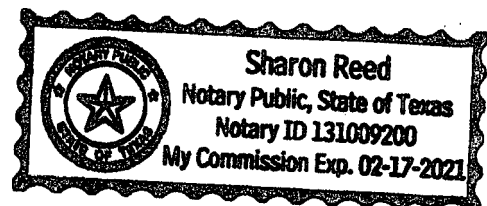


Jon Leger
 MWD Ops Coordinator

On this, the 18th day of December, 2017, before me a notary public, the undersigned officer, personally appeared Jonathan Leger, 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





HOBBS OCD

JUN 11 2018

RECEIVED

5D Survey Report

XTO Energy

Field Name: *XTO Lea Co, NM (NAD 27 NME)*
Site Name: *Espejo Federal Com 1H,2H,3H Pad*
Well Name: *Espejo Federal Com 1H*
Survey: *Definitive survey*

18 December 2017





Espejo Federal Com 1H

Field Name: XTO Lea Co, NM (NAD 27 NME)	Map Units: US ft		Company Name: XTO Energy	
	Vertical Reference Datum (VRD): Mean Sea Level			
	Projected Coordinate System: NAD27 / New Mexico East			
	Comment:			
Site: Espejo Federal Com 1H,2H,3H Pad	Units: US ft	North Reference: Grid	Convergence Angle: 0.43	
	Position:	Northing: 597189.30 US ft	Latitude: 32° 38' 21.07"	
		Easting: 748217.20 US ft	Longitude: -103° 31' 37.15"	
	Elevation above MSL: 3774.00 US ft			
Comment:				
Slot: Espejo Federal Com 1H	Position (Relative to Site Centre)			
	+N/-S: 0.00 US ft	Northing: 597189.30 US ft	Latitude: 32°38'21.07"	
	+E/-W: 0.00 US ft	Easting: 748217.20 US ft	Longitude: -103°31'37.15"	
	Elevation above MSL: 3774.00 US ft			
Comment:				
Well: Espejo Federal Com 1H	Type: Main well		UWI:	
	File Number:	Comment:		
	Closure Distance: 5418.6 US ft	Closure Azimuth: 171.32°		
	Vertical Section: Position of Origin (Relative to Slot centre)			
	+N/-S: -0.00 US ft	+E/-W: -0.00 US ft	Az: 177.63°	

Drill floor: Survey Name: Definitive Survey			
Rig Height (Drill Floor): 26.50 US ft	Elevation above MSL: 3800.50 US ft	Inclination: 0.00°	Azimuth: 0.00°

Survey Name: Definitive Survey				
Date: 17/Oct/2017	Survey Tool: See Survey Tool Ranges below.	Comment:	Company:	
Magnetic Model:				
Model Name: bggm2017	Date: 10/Nov/2017	Field Strength: 48234.5 nT	Declination: 6.96°	Dip: 60.45°
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

Survey Tool Ranges:			
Name	Start MD(USFt)	End MD(USFt)	Source Survey
MWD	0.00	3894.00	WellBenders MWD
MWD	3894.00	9823.00	WFT MWD SVY_1
MWD	9823.00	11546.00	WFT MWD SVY_2

5D Survey Report

Survey Tool Ranges:

Name	Start MD(USFt)	End MD(USFt)	Source Survey
MWD	11546.00	16143.00	WFT MWD SVY_3

Casing Points: (Relative to Slot centre)(TVD relative to Drill Floor)

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Name
4025.37	1.64	52.27	4025.00	15.47	32.07	597204.77	748249.27	9 5/8 in

Wellpath created using minimum curvature.**Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)**

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Clos.Dist (US ft)	Clos.Az (°)	Comment
3894.00	1.60	51.70	3893.68	-11.97	13.19	29.15	597202.49	748246.35	31.99	65.66	Tie On WellBenders
4025.37	1.64	52.27	4025.00	-14.14	15.47	32.07	597204.77	748249.27	35.61	64.24	9 5/8 in
4062.00	1.65	52.42	4061.61	-14.74	16.12	32.91	597205.42	748250.11	36.64	63.91	
4126.00	1.82	47.34	4125.58	-15.93	17.37	34.38	597206.67	748251.58	38.52	63.20	
4221.00	0.35	132.19	4220.57	-16.70	18.20	35.71	597207.50	748252.91	40.08	63.00	
4316.00	0.30	169.62	4315.57	-16.25	17.76	35.97	597207.06	748253.17	40.11	63.73	
4412.00	0.30	187.47	4411.56	-15.76	17.26	35.98	597206.56	748253.18	39.91	64.37	
4508.00	0.31	182.10	4507.56	-15.25	16.75	35.94	597206.05	748253.14	39.65	65.01	
4603.00	0.35	178.18	4602.56	-14.70	16.20	35.94	597205.50	748253.14	39.42	65.73	
4697.00	0.29	162.82	4696.56	-14.19	15.69	36.02	597204.99	748253.22	39.29	66.46	
4791.00	0.36	171.77	4790.56	-13.66	15.17	36.13	597204.47	748253.33	39.19	67.22	
4885.00	0.38	180.53	4884.56	-13.06	14.57	36.17	597203.87	748253.37	38.99	68.07	
4978.00	0.38	162.85	4977.55	-12.45	13.96	36.26	597203.26	748253.46	38.85	68.94	
5072.00	0.36	167.89	5071.55	-11.86	13.38	36.41	597202.68	748253.61	38.79	69.83	
5166.00	0.35	157.75	5165.55	-11.30	12.82	36.58	597202.12	748253.78	38.76	70.69	
5261.00	0.31	158.27	5260.55	-10.78	12.31	36.79	597201.61	748253.99	38.79	71.49	
5357.00	0.29	143.83	5356.55	-10.34	11.88	37.03	597201.18	748254.23	38.89	72.22	
5452.00	0.35	127.26	5451.55	-9.95	11.51	37.40	597200.81	748254.60	39.13	72.90	
5548.00	0.47	238.59	5547.55	-9.57	11.12	37.30	597200.42	748254.50	38.92	73.39	
5643.00	0.79	257.59	5642.54	-9.27	10.78	36.33	597200.08	748253.53	37.89	73.47	
5738.00	0.53	265.73	5737.53	-9.14	10.61	35.25	597199.91	748252.45	36.81	73.25	
5833.00	0.36	275.47	5832.53	-9.17	10.60	34.51	597199.90	748251.71	36.10	72.92	
5929.00	0.41	248.31	5928.53	-9.09	10.50	33.89	597199.80	748251.09	35.48	72.78	
6025.00	0.40	219.15	6024.53	-8.73	10.12	33.36	597199.42	748250.56	34.86	73.13	
6119.00	0.63	200.42	6118.52	-8.01	9.38	32.97	597198.68	748250.17	34.28	74.12	
6215.00	0.60	205.84	6214.52	-7.08	8.43	32.57	597197.73	748249.77	33.65	75.49	
6310.00	0.16	220.64	6309.51	-6.54	7.88	32.27	597197.18	748249.47	33.22	76.27	
6405.00	0.65	213.63	6404.51	-6.01	7.33	31.88	597196.63	748249.08	32.72	77.04	
6500.00	0.82	211.77	6499.50	-5.01	6.31	31.23	597195.61	748248.43	31.86	78.58	
6596.00	0.69	205.66	6595.50	-3.93	5.20	30.62	597194.50	748247.82	31.05	80.35	
6691.00	0.84	218.60	6690.49	-2.90	4.14	29.93	597193.44	748247.13	30.22	82.12	
6787.00	0.75	220.46	6786.48	-1.91	3.12	29.09	597192.42	748246.29	29.25	83.89	
6883.00	0.65	224.88	6882.47	-1.08	2.25	28.29	597191.55	748245.49	28.38	85.45	
6978.00	0.60	223.93	6977.46	-0.37	1.51	27.57	597190.81	748244.77	27.61	86.86	
7073.00	0.56	229.30	7072.46	0.26	0.85	26.87	597190.15	748244.07	26.89	88.19	
7168.00	0.74	246.51	7167.45	0.77	0.30	25.96	597189.60	748243.16	25.96	89.33	
7262.00	0.71	248.96	7261.45	1.18	-0.15	24.86	597189.15	748242.06	24.86	90.34	
7358.00	0.55	246.40	7357.44	1.53	-0.55	23.88	597188.75	748241.08	23.89	91.31	
7453.00	0.65	232.30	7452.44	2.01	-1.06	23.04	597188.24	748240.24	23.06	92.63	
7549.00	0.66	211.52	7548.43	2.78	-1.86	22.32	597187.44	748239.52	22.39	94.77	
7643.00	1.12	264.86	7642.42	3.28	-2.41	21.12	597186.89	748238.32	21.25	96.50	
7739.00	1.21	269.94	7738.40	3.28	-2.49	19.17	597186.81	748236.37	19.33	97.40	
7835.00	1.13	261.15	7834.38	3.35	-2.64	17.22	597186.66	748234.42	17.42	98.71	
7931.00	1.09	263.64	7930.36	3.52	-2.88	15.38	597186.42	748232.58	15.65	100.62	
8027.00	1.22	299.72	8026.34	3.04	-2.48	13.58	597186.82	748230.78	13.81	100.34	
8122.00	1.22	308.42	8121.32	1.84	-1.35	11.91	597187.95	748229.11	11.99	96.46	
8216.00	1.49	310.10	8215.30	0.36	0.06	10.19	597189.36	748227.39	10.19	89.67	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)											
ID (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N. Offset (US ft)	E. Offset (US ft)	Northing (US ft)	Easting (US ft)	Clos. Dist (US ft)	Clos. Az (°)	Comment
8310.00	1.40	310.09	8309.27	-1.24	1.59	8.38	597190.89	748225.58	8.53	79.28	
8405.00	0.47	301.39	8404.25	-2.24	2.54	7.16	597191.84	748224.36	7.60	70.49	
8499.00	0.75	304.20	8498.25	-2.82	3.08	6.32	597192.38	748223.52	7.03	64.00	
8593.00	1.14	295.24	8592.23	-3.62	3.83	4.97	597193.13	748222.17	6.27	52.38	
8688.00	1.64	304.48	8687.21	-4.87	5.00	2.99	597194.30	748220.19	5.83	30.89	
8783.00	2.02	328.02	8782.16	-7.14	7.19	0.98	597196.49	748218.18	7.26	7.79	
8877.00	1.93	334.13	8876.10	-10.04	10.02	-0.58	597199.32	748216.62	10.04	356.66	
8972.00	1.39	60.20	8971.07	-12.03	12.03	-0.28	597201.33	748216.92	12.04	358.66	
9066.00	2.08	112.44	9065.04	-11.84	11.95	2.28	597201.25	748219.48	12.16	10.82	
9162.00	1.38	167.57	9161.00	-9.97	10.15	4.14	597199.45	748221.34	10.97	22.20	
9256.00	1.35	180.24	9254.97	-7.75	7.94	4.38	597197.24	748221.58	9.07	28.89	
9350.00	1.54	175.52	9348.94	-5.38	5.57	4.48	597194.87	748221.68	7.15	38.77	
9445.00	1.73	181.23	9443.90	-2.68	2.87	4.55	597192.17	748221.75	5.37	57.75	
9540.00	0.65	224.35	9538.88	-0.88	1.05	4.14	597190.35	748221.34	4.27	75.78	
9635.00	0.63	228.67	9633.88	-0.18	0.32	3.37	597189.62	748220.57	3.38	84.60	
9728.00	0.63	220.92	9726.87	0.51	-0.41	2.65	597188.89	748219.85	2.68	98.70	
9823.00	1.07	212.29	9821.86	1.62	-1.55	1.83	597187.75	748219.03	2.40	130.20	
9942.00	0.78	52.58	9940.85	2.07	-2.00	1.88	597187.30	748219.08	2.75	136.67	
10036.00	1.09	74.21	10034.84	1.50	-1.37	3.25	597187.93	748220.45	3.53	112.77	
10068.00	5.26	87.63	10066.79	1.43	-1.22	5.01	597188.08	748222.21	5.16	103.70	
10100.00	9.98	91.43	10098.49	1.61	-1.23	9.25	597188.07	748226.45	9.33	97.57	
10132.00	13.51	94.35	10129.82	2.23	-1.58	15.75	597187.72	748232.95	15.83	95.74	
10164.00	16.15	93.99	10160.75	3.16	-2.18	23.92	597187.12	748241.12	24.02	95.20	
10196.00	17.69	93.64	10191.36	4.17	-2.79	33.21	597186.51	748250.41	33.33	94.81	
10227.00	19.77	91.76	10220.72	5.04	-3.25	43.16	597186.05	748260.36	43.28	94.31	
10259.00	21.57	90.76	10250.66	5.75	-3.50	54.45	597185.80	748271.65	54.56	93.68	
10290.00	25.04	91.05	10279.13	6.45	-3.69	66.71	597185.61	748283.91	66.81	93.17	
10322.00	28.26	93.71	10307.72	7.66	-4.31	81.04	597184.99	748298.24	81.16	93.04	
10353.00	30.87	96.93	10334.69	9.72	-5.74	96.26	597183.56	748313.46	96.44	93.41	
10385.00	33.79	99.28	10361.73	12.84	-8.17	113.20	597181.13	748330.40	113.50	94.13	
10418.00	37.05	100.45	10388.61	16.90	-11.45	132.04	597177.85	748349.24	132.53	94.96	
10449.00	39.53	100.68	10412.94	21.20	-14.98	150.92	597174.32	748368.12	151.66	95.67	
10481.00	42.16	102.10	10437.15	26.19	-19.12	171.43	597170.18	748388.63	172.50	96.36	
10513.00	43.43	105.86	10460.63	32.31	-24.37	192.52	597164.93	748409.72	194.06	97.22	
10544.00	43.72	112.64	10483.11	40.18	-31.41	212.67	597157.89	748429.87	214.97	98.40	
10575.00	44.31	116.05	10505.40	49.86	-40.29	232.28	597149.01	748449.48	235.75	99.84	
10607.00	45.19	118.22	10528.13	60.96	-50.57	252.33	597138.73	748469.53	257.35	101.33	
10639.00	47.15	119.22	10550.29	72.88	-61.67	272.57	597127.63	748489.77	279.46	102.75	
10671.00	48.95	120.53	10571.68	85.58	-73.52	293.20	597115.78	748510.40	302.28	104.08	
10702.00	49.79	122.14	10591.87	98.64	-85.76	313.30	597103.54	748530.50	324.82	105.31	
10733.00	50.70	124.10	10611.69	112.48	-98.78	333.25	597090.52	748550.45	347.59	106.51	
10764.00	52.83	126.76	10630.88	127.40	-112.90	353.09	597076.40	748570.29	370.70	107.73	
10796.00	53.43	130.14	10650.08	144.14	-128.82	373.13	597060.48	748590.33	394.74	109.05	
10827.00	55.55	133.64	10668.09	161.75	-145.67	391.90	597043.63	748609.10	418.10	110.39	
10859.00	57.33	136.06	10685.78	181.32	-164.48	410.80	597024.82	748628.00	442.50	111.82	
10890.00	59.24	139.20	10702.08	201.52	-183.96	428.56	597005.34	748645.76	466.37	113.23	
10922.00	61.02	141.40	10718.02	223.59	-205.31	446.28	596983.99	748663.48	491.24	114.70	
10954.00	61.62	143.90	10733.38	246.59	-227.63	463.31	596961.67	748680.51	516.20	116.17	
10985.00	61.97	145.51	10748.03	269.52	-249.92	479.09	596939.38	748696.29	540.36	117.55	
11016.00	63.08	147.47	10762.33	293.06	-272.85	494.27	596916.45	748711.47	564.58	118.90	
11048.00	65.03	150.37	10776.34	318.30	-297.50	509.12	596891.80	748726.32	589.67	120.30	
11078.00	66.78	153.65	10788.59	342.99	-321.68	521.96	596867.62	748739.16	613.12	121.64	
11110.00	68.44	157.09	10800.78	370.36	-348.57	534.29	596840.73	748751.49	637.94	123.12	
11141.00	70.53	159.35	10811.64	397.75	-375.53	545.05	596813.77	748762.25	661.89	124.57	
11173.00	72.60	161.54	10821.76	426.75	-404.13	555.21	596785.17	748772.41	686.72	126.05	
11204.00	74.64	163.78	10830.51	455.47	-432.52	564.07	596756.78	748781.27	710.81	127.48	
11235.00	76.01	165.40	10838.36	484.69	-461.43	572.04	596727.87	748789.24	734.94	128.89	
11267.00	77.95	167.63	10845.57	515.28	-491.74	579.30	596697.56	748796.50	759.87	130.33	
11298.00	79.95	169.44	10851.51	545.32	-521.56	585.35	596667.74	748802.55	784.00	131.70	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)											
HD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N. Offset (US ft)	E. Offset (US ft)	Northing (US ft)	Easting (US ft)	Clas. Dist (US ft)	Clas. Az (°)	Comment
11329.00	81.78	171.06	10856.43	575.67	-551.72	590.53	596637.58	748807.73	808.16	133.05	
11359.00	84.11	172.53	10860.12	605.29	-581.19	594.78	596608.11	748811.98	831.59	134.34	
11391.00	85.38	174.24	10863.05	637.06	-612.84	598.45	596576.46	748815.65	856.57	135.68	
11453.00	87.90	176.06	10866.68	698.89	-674.50	603.68	596514.80	748820.88	905.20	138.17	
11546.00	87.69	175.67	10870.26	791.78	-767.19	610.38	596422.11	748827.58	980.38	141.49	
11569.00	87.48	175.44	10871.23	814.74	-790.10	612.16	596399.20	748829.36	999.50	142.23	
11664.00	90.21	176.08	10873.14	909.66	-884.81	619.18	596304.49	748836.38	1079.95	145.02	
11757.00	92.45	176.26	10870.99	1002.60	-977.57	625.39	596211.73	748842.59	1160.50	147.39	
11853.00	92.10	176.83	10867.17	1098.51	-1073.32	631.17	596115.98	748848.37	1245.15	149.54	
11948.00	91.25	174.05	10864.40	1193.39	-1167.97	638.72	596021.33	748855.92	1331.21	151.33	
12044.00	90.28	179.35	10863.11	1289.33	-1263.77	644.25	595925.53	748861.45	1418.51	152.99	
12140.00	88.25	180.61	10864.35	1385.23	-1359.75	644.28	595829.55	748861.48	1504.67	154.65	
12234.00	89.02	181.02	10866.59	1479.06	-1453.72	642.94	595735.58	748860.14	1589.55	156.14	
12330.00	90.28	180.83	10867.17	1574.90	-1549.70	641.39	595639.60	748858.59	1677.19	157.52	
12424.00	89.02	180.60	10867.75	1668.76	-1643.69	640.22	595545.61	748857.42	1763.97	158.72	
12519.00	87.97	179.24	10870.24	1763.65	-1738.65	640.35	595450.65	748857.55	1852.83	159.78	
12613.00	86.50	178.53	10874.78	1857.51	-1832.52	642.18	595356.78	748859.38	1941.79	160.69	
12709.00	86.57	177.78	10880.58	1953.33	-1928.30	645.27	595261.00	748862.47	2033.40	161.50	
12803.00	87.62	177.80	10885.34	2047.21	-2022.11	648.89	595167.19	748866.09	2123.67	162.21	
12899.00	86.57	177.77	10890.21	2143.08	-2117.91	652.59	595071.39	748869.79	2216.17	162.87	
12994.00	87.41	177.49	10895.20	2237.95	-2212.70	656.51	594976.60	748873.71	2308.04	163.47	
13089.00	88.60	178.17	10898.50	2332.89	-2307.57	660.11	594881.73	748877.31	2400.13	164.04	
13184.00	88.81	177.14	10900.65	2427.87	-2402.46	664.00	594786.84	748881.20	2492.53	164.55	
13280.00	89.79	177.25	10901.82	2523.85	-2498.34	668.69	594690.96	748885.89	2586.28	165.02	
13375.00	89.44	176.35	10902.46	2618.84	-2593.19	674.00	594596.11	748891.20	2679.35	165.43	
13469.00	90.14	176.37	10902.80	2712.82	-2687.00	679.96	594502.30	748897.16	2771.70	165.80	
13563.00	88.18	176.10	10904.18	2806.77	-2780.78	686.13	594408.52	748903.33	2864.18	166.14	
13659.00	88.95	175.93	10906.59	2902.71	-2876.52	692.80	594312.78	748910.00	2958.77	166.46	
13753.00	90.21	176.09	10907.28	2996.66	-2970.28	699.34	594219.02	748916.54	3051.50	166.75	
13849.00	91.82	176.27	10905.58	3092.61	-3066.05	705.74	594123.25	748922.94	3146.23	167.04	
13945.00	90.84	177.16	10903.35	3188.57	-3161.87	711.24	594027.43	748928.44	3240.87	167.32	
14040.00	88.25	177.52	10904.10	3283.56	-3256.75	715.65	593932.55	748932.85	3334.46	167.61	
14135.00	88.74	177.37	10906.60	3378.53	-3351.63	719.88	593837.67	748937.08	3428.06	167.88	
14231.00	90.28	177.50	10907.42	3474.52	-3447.52	724.18	593741.78	748941.38	3522.76	168.14	
14327.00	88.81	177.34	10908.18	3570.52	-3543.42	728.50	593645.88	748945.70	3617.53	168.38	
14423.00	89.44	177.27	10909.65	3666.50	-3639.30	733.01	593550.00	748950.21	3712.39	168.61	
14518.00	88.39	176.83	10911.44	3761.48	-3734.16	737.90	593455.14	748955.10	3806.37	168.82	
14613.00	88.60	176.79	10913.94	3856.44	-3828.98	743.18	593360.32	748960.38	3900.44	169.02	
14707.00	90.21	176.70	10914.92	3950.42	-3922.82	748.52	593266.48	748965.72	3993.59	169.20	
14803.00	89.51	176.84	10915.15	4046.40	-4018.67	753.93	593170.63	748971.13	4088.78	169.37	
14899.00	87.76	178.41	10917.44	4142.37	-4114.55	757.91	593074.75	748975.11	4183.77	169.56	
14995.00	89.09	178.40	10920.08	4238.32	-4210.47	760.58	592978.83	748977.78	4278.62	169.76	
15090.00	90.98	178.19	10920.02	4333.31	-4305.43	763.40	592883.87	748980.60	4372.58	169.95	
15186.00	90.00	178.27	10919.20	4429.30	-4401.38	766.37	592787.92	748983.57	4467.60	170.12	
15282.00	85.94	177.95	10922.60	4525.22	-4497.24	769.53	592692.06	748986.73	4562.61	170.29	
15378.00	86.85	177.72	10928.63	4621.03	-4592.98	773.15	592596.32	748990.35	4657.60	170.44	
15474.00	88.11	177.39	10932.85	4716.93	-4688.80	777.24	592500.50	748994.44	4752.79	170.59	
15569.00	89.37	176.98	10934.94	4811.90	-4783.66	781.91	592405.64	748999.11	4847.14	170.72	
15665.00	90.00	176.67	10935.47	4907.89	-4879.51	787.22	592309.79	749004.42	4942.61	170.84	
15759.00	90.84	176.26	10934.78	5001.87	-4973.33	793.02	592215.97	749010.22	5036.16	170.94	
15855.00	89.23	176.49	10934.72	5097.84	-5069.14	799.09	592120.16	749016.29	5131.73	171.04	
15950.00	90.35	176.57	10935.07	5192.82	-5163.96	804.84	592025.34	749022.04	5226.30	171.14	
16046.00	90.70	175.99	10934.19	5288.79	-5259.75	811.07	591929.55	749028.27	5321.92	171.23	
16078.00	90.70	175.85	10933.80	5320.78	-5291.67	813.34	591897.63	749030.54	5353.81	171.26	Last WFT SVY
16143.00	90.70	175.85	10933.01	5385.74	-5356.49	818.05	591832.81	749035.25	5418.60	171.32	PTB

5D Survey Report

Formation Points: (Relative to Slot centre)(TVD relative to Drill Floor)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Name	Comment
4711.94	0.30	164.52	4711.50	15.62	36.04	597204.92	748253.24	Queen	
4981.95	0.38	163.05	4981.50	13.94	36.27	597203.24	748253.47	Penrose Sand	
5266.95	0.31	157.44	5266.50	12.28	36.80	597201.58	748254.00	Grayburg	
5931.97	0.41	247.46	5931.50	10.50	33.87	597199.80	748251.07	Delaware	
6692.01	0.84	218.62	6691.50	4.13	29.92	597193.43	748247.12	Brushy Canyon	
7997.15	1.13	289.57	7996.50	-2.74	14.14	597186.56	748231.34	Basal Brushy Canyon	
8192.20	1.42	309.73	8191.50	-0.33	10.66	597188.97	748227.86	"BSGL" Marker	
8212.20	1.48	310.04	8211.50	-0.00	10.27	597189.30	748227.47	Bone Spring	
8352.24	0.98	308.25	8351.50	2.14	7.70	597191.44	748224.90	Avalon Sand	
8852.38	1.95	332.48	8851.50	9.28	-0.21	597198.58	748216.99	Lower Avalon Shale	
9027.44	1.64	96.48	9026.50	12.28	1.09	597201.58	748218.29	First Bone Spring Limestone	
9542.62	0.65	224.47	9541.50	1.03	4.12	597190.33	748221.32	First Bone Spring Sand	
9727.63	0.63	220.95	9726.50	-0.40	2.65	597188.90	748219.85	First Bone Spring Middle	
9847.64	0.70	207.69	9846.50	-1.88	1.64	597187.42	748218.84	Second Bone Spring Limestone	
10052.67	3.25	85.49	10051.50	-1.28	3.88	597188.02	748221.08	Second Bone Spring (Upper) Sand	
10201.40	18.05	93.28	10196.50	-2.89	34.87	597186.41	748252.07	Second Bone Spring Lower Limestone	
10243.82	20.72	91.21	10236.50	-3.40	48.97	597185.90	748266.17	Second Bone Spring Lower Sand	
10381.12	33.43	99.01	10358.50	-7.83	111.08	597181.47	748328.28	Second Bone Spring "B" Sand	
10478.78	41.98	102.01	10435.50	-18.80	169.97	597170.50	748387.17	Base "B" Sand	
10514.19	43.43	106.12	10461.50	-24.60	193.30	597164.70	748410.50	Third Bone Spring Limestone	
10812.01	54.51	131.97	10659.50	-137.32	382.89	597051.98	748600.09	Third Bone Spring Sand	
10994.56	62.31	146.12	10752.50	-256.91	483.84	596932.39	748701.04	Third Bone Spring WW Sand	
11189.32	73.67	162.73	10826.50	-419.00	560.00	596770.30	748777.20	Base WW Sand	
11223.37	75.49	164.79	10835.50	-450.54	569.14	596738.76	748786.34	Third Bone Spring RH Sand Marker	
11257.31	77.36	166.96	10843.50	-482.51	577.22	596706.79	748794.42	Third Bone Spring RH Sand	
14342.95	88.91	177.33	10908.50	-3559.35	729.24	593629.95	748946.44	Base RH Sand/Wolfcamp	