

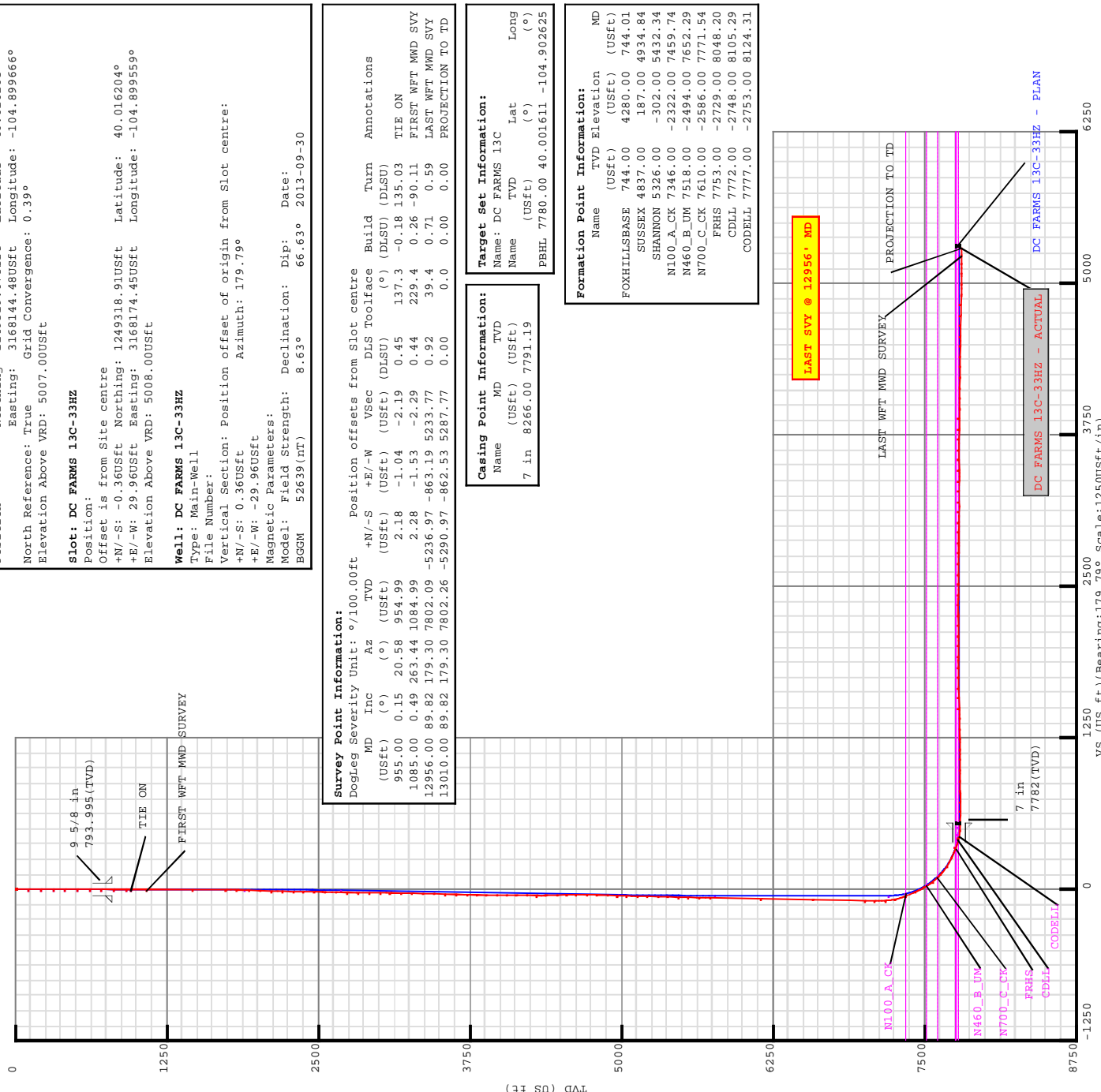
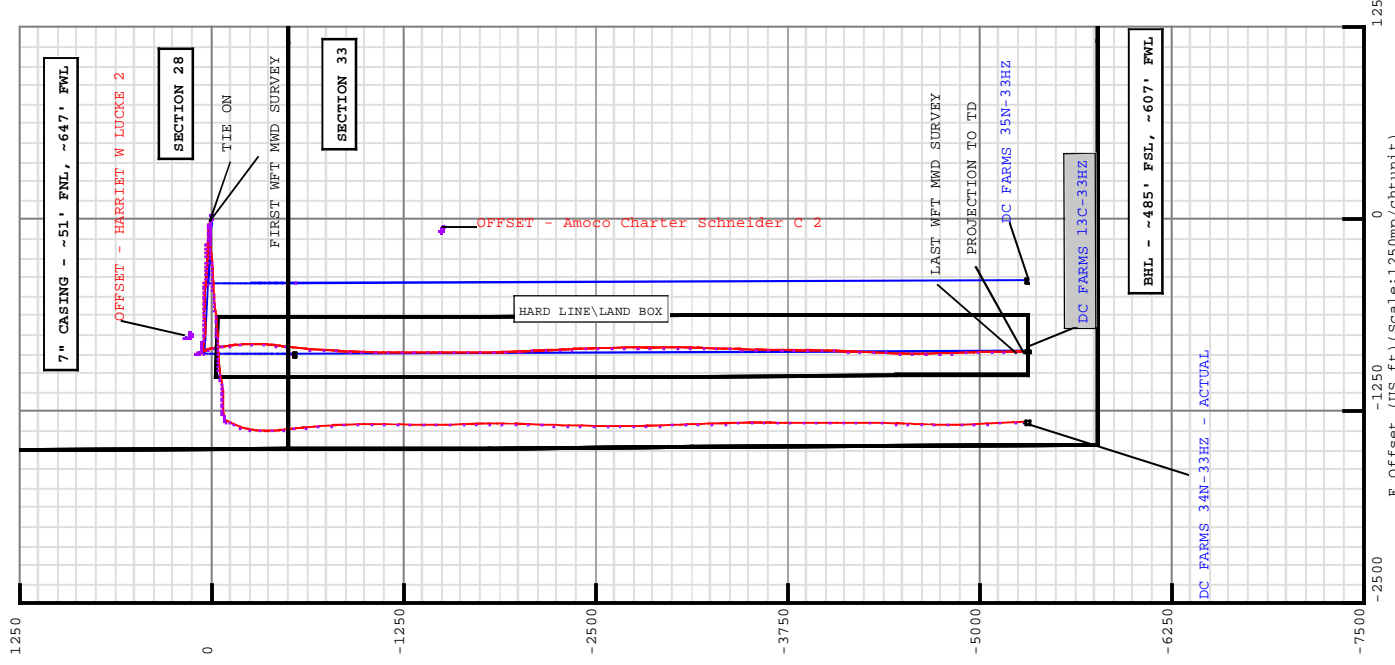
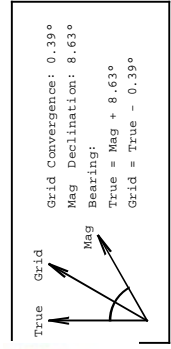
Plan Data for DC FARMS 13C-33HZ

Field: WATTENBERG ANADARKO_NAD 83
Map Unit: USFT Vertical Reference Datum (VRD): Mean Sea Level
Projected Coordinate System: NAD83 / Colorado North (ftUS)

Site: DC FARMS 13C-33HZ PAD
Unit: USFeet TVD Reference:
Company Name: Anadarko Petroleum
Position:
North: 1249319.07USft Latitude: 40.016205°
East: 3168144.48USft Longitude: -104.899666°
North Reference: True Grid Convergence: 0.39°
Elevation Above VRD: 5007.00USft

Slot: DC FARMS 13C-33HZ
Position:
Offset is from Site centre
+N/-S: -0.36USft Northing: 1249319.91USft Latitude: 40.016204°
+E/-W: 29.96USft Easting: 3168174.45USft Longitude: -104.899559°
Elevation Above VRD: 5008.00USft

Well: DC FARMS 13C-33HZ
Type: Main-Well
File Number:
Vertical Section: Position offset of origin from Slot centre:
+N/-S: 0.36USft Azimuth: 179.79°
+E/-W: -29.96USft
Magnetic Parameters:
Model: Field Strength: Declination: Dip: Date:
BGGM 52639(NT) 8.63° 66.63° 2013-09-30



Survey Point Information:

DogLeg Severity Unit: °/100.00ft	MD	Inc	Az	TVD	+N/-S	+E/-W	VSec	DLS Toolface	Build	Turn	Annotations
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(USft)	(°)	(DLSU)	(DLSU)	
955.00	0.15	20.58	954.99	2.18	-1.04	-2.19	0.45	137.3	-0.18	135.03	TIE ON
1085.00	0.49	263.44	1084.99	2.28	-1.53	-2.29	0.44	229.4	0.26	-90.11	FIRST WFT MWD SVY
12956.00	89.82	179.30	7802.09	-5236.97	-863.19	5233.77	0.92	39.4	0.71	0.59	LAST WFT MWD SVY
13010.00	89.82	179.30	7802.26	-5290.97	-862.53	5287.77	0.00	0.0	0.00	0.00	PROJECTION TO TD

Casing Point Information:

Name	MD	TVD
7 in	8266.00	7791.19

Target Set Information:

Name	TVD	Lat	Long
DC FARMS 13C			
PBHL	7780.00	40.001611	-104.902625

Formation Point Information:

Name	TVD Elevation	MD
FOXHILLSBASE	744.00	4280.00
SUSSEX	4837.00	187.00
SHANNON	5326.00	-302.00
N100_A_CK	7346.00	-2322.00
N460_B_UW	7516.00	-2494.00
N700_C_CK	7610.00	-2586.00
FRHS	7753.00	-2729.00
CDLL	7772.00	-2748.00
CODELL	7777.00	-2753.00



5D Survey Report

Anadarko Petroleum

Field Name: WATTENBERG_ANADARKO_NAD 83
Site Name: DC FARMS 13C-33HZ PAD
Well Name: DC FARMS 13C-33HZ
Survey: Definitive Survey



DEFINITIVE SURVEYS FOR THE DC FARMS 13C-33HZ

Site Name DC FARMS 13C-33HZ PAD	Units : US ft	North Reference : True	Convergence Angle : 0.39
	Position	Northing : 1249319.07 US ft Easting : 3168144.48 US ft	Latitude : 40.016205 Longitude : -104.899666
	Elevation above:5007.00 US ft Comment :		
Slot Name DC FARMS 13C-33HZ	+N / -S : -0.36 US ft +E / -W : 29.96 US ft	Position (Offsets relative to Site Centre)	
		Northing :1249318.91 US ft Easting :3168174.45 US ft	Latitude : 40.016204 Longitude : -104.899559
	Slot TVD Reference : Ground Elevation Elevation above : 5008.00 US ft Comment :		
Well Name DC FARMS 13C-33HZ	Type : Main well	UWI :	
	Rig Height Drill Floor : 16.00 US ft Relative to : 5024.00 US ft	Comment :	
	Closure Distance : 5360.81 US ft Vertical Section (Position of Origin Relative to Slot) +N / -S : 0.36 US ft +E / -W : -29.96 US ft Az :179.79°	Closure Azimuth : 189.259°	

Target Set	
Name : DC FARMS 13C Number of Targets : 2	
Comment :	
TargetName: HEEL Shape: Cuboid	Position (Relative to centre) Northing : 1248763.99 US ft Easting : 3167302.19US ft Latitude : 40°0'52.908680" Longitude : -104°54'9.671574"
TVD (Drill Floor) : 7782.00 US ft	
Orientation Dimensions	Azimuth : 0.00° Length : 20.00 US ft Inclination : 0.00° Breadth : 20.00 US ft Height : 20.00 US ft

TargetName: PBHL Shape: Cuboid	+ N / -S : -5315.84US ft + E / -W : -858.92 US ft					Position (Relative to centre) Northing : 1243997.38 US ft Easting : 3167351.54US ft			Latitude : 40°0'5.799600" Longitude : -104°54'9.450000"	
	TVD (Drill Floor) : 7780.00 US ft									
	Orientation		Azimuth : 0.00°		Inclination : 0.00°					
	Dimensions		Length : 20.00 US ft		Breadth : 20.00 US ft		Height : 20.00 US ft			

Survey Name :Definitive Survey		
Date : 04/Sep/2013	Survey Tool :	Company :
Magnetic Model		
Model Name: BGGM	Date: 05/Sep/2013	Field Strength: 52648.2 nT
		Dip: 56.63°
Survey Tool Ranges		
Name	Start MD (us ft)	End MD (us ft)
NSG Static GMS	0.00	955.00
MWD	955.00	13010.00
SURFACE GYRO SURVEYS		
WFT MWD SURVEYS		

Casing Points (Relative to centre, TVD relative to Drill Floor)									
Name	MD (US ft)	Az (°)	TVD (US ft)	Inc (°)	N.Offset (US ft)	E.Offset (US ft)	Az (°)	TVD (US ft)	Longitude (°)
7 in			8266.00	88.31	0.00	186.06	7791.19	-550.05	-104.902554

Well path created using minimum curvature

Survey Points (Relative to centre, TVD relative to Drill Floor)													
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	T.Face (°)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)
0.00	0.00	0.00	0.00	0.00	0.00	40.016204	-104.899559	0.00	0.00	0.00	0.47	0.00	0.00
16.00	0.00	0.00	16.00	0.00	0.00	40.016204	-104.899559	0.00	0.00	16.00	0.47	0.00	0.00
116.00	0.38	336.93	116.00	0.31	-0.13	40.016205	-104.899559	0.38	336.93	100.00	0.17	-0.00	0.00
216.00	0.21	260.56	216.00	0.58	-0.44	40.016206	-104.899561	0.39	211.69	100.00	-0.11	-0.00	0.00
316.00	0.23	302.54	316.00	0.66	-0.79	40.016206	-104.899562	0.16	104.23	100.00	-0.19	-0.00	0.00
416.00	0.12	298.43	416.00	0.82	-1.05	40.016206	-104.899563	0.11	184.46	100.00	-0.35	-0.00	0.00
516.00	0.26	330.24	516.00	1.06	-1.26	40.016207	-104.899564	0.17	53.62	100.00	-0.59	-0.00	0.00
616.00	0.25	357.50	616.00	1.48	-1.38	40.016208	-104.899564	0.12	108.25	100.00	-1.01	-0.00	0.00
716.00	0.14	68.85	716.00	1.74	-1.27	40.016209	-104.899564	0.24	147.12	100.00	-1.27	-0.00	0.00
816.00	0.16	62.98	815.99	1.85	-1.04	40.016209	-104.899563	0.03	319.50	100.00	-1.38	-0.00	0.00
916.00	0.22	327.92	915.99	2.07	-1.01	40.016210	-104.899563	0.28	230.69	100.00	-1.60	-0.00	0.00
955.00	0.15	20.58	954.99	2.18	-1.04	40.016210	-104.899563	0.45	137.25	39.00	-1.71	-0.00	0.00
													TIE ON

5D Survey Report

Survey Points (Relative to centre, TVD relative to Drill Floor)														
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	Latitude (°)	-Longitude (°)	DLS (°/100 US ft)	T. Face (°)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment
1085.00	0.49	263.44	1084.99	2.28	-1.53	40.016210	-104.899564	0.44	229.42	130.00	-1.81	-0.62	0.13	FIRST WFT MWD SURVEY
1461.00	0.55	325.03	1460.98	3.58	-4.16	40.016214	-104.899574	0.14	115.26	376.00	-3.12	-2.38	2.56	
1742.00	0.44	273.19	1741.97	4.74	-6.01	40.016217	-104.899580	0.16	231.20	281.00	-4.29	-5.47	-1.13	
1836.00	3.22	297.15	1835.91	5.97	-8.72	40.016220	-104.899590	3.00	27.58	94.00	-5.52	-8.41	1.37	
1929.00	5.61	292.87	1928.63	8.92	-15.23	40.016229	-104.899613	2.59	350.01	93.00	-8.51	-15.46	0.49	
2024.00	6.58	284.72	2023.10	12.11	-24.78	40.016237	-104.899647	1.37	314.16	95.00	-11.73	-22.94	-2.88	
2115.00	7.38	283.94	2113.42	14.85	-35.49	40.016245	-104.899686	0.89	352.86	91.00	-14.50	-28.69	-4.29	
2206.00	9.16	280.42	2203.47	17.56	-48.29	40.016252	-104.899731	2.03	342.37	91.00	-17.27	-33.25	-7.48	
2297.00	10.10	274.46	2293.19	19.49	-63.37	40.016258	-104.899785	1.50	310.35	91.00	-19.25	-36.35	-11.91	
2388.00	11.16	274.99	2382.63	20.88	-80.10	40.016261	-104.899845	1.17	5.53	91.00	-20.70	-39.21	-11.99	
2479.00	11.88	272.47	2471.79	22.05	-98.23	40.016265	-104.899910	0.97	323.81	91.00	-21.94	-39.87	-13.89	
2572.00	13.36	271.91	2562.54	22.82	-118.53	40.016267	-104.899982	1.60	355.00	93.00	-22.78	-39.74	-13.96	
2664.00	15.10	275.33	2651.72	24.29	-141.09	40.016271	-104.900063	2.10	27.45	92.00	-24.33	-40.05	-11.93	
2757.00	16.18	275.16	2741.27	26.58	-166.06	40.016277	-104.900152	1.16	357.49	93.00	-26.71	-39.58	-13.02	
2849.00	16.98	271.90	2829.45	28.18	-192.25	40.016281	-104.900245	1.33	309.12	92.00	-28.41	-39.72	-15.39	
2943.00	17.01	270.60	2919.35	28.78	-219.72	40.016283	-104.900343	0.41	273.89	94.00	-29.11	-41.03	-15.46	
3036.00	16.68	269.66	3008.36	28.84	-246.67	40.016283	-104.900440	0.46	219.09	93.00	-29.27	-42.19	-14.81	
3129.00	17.34	275.39	3097.29	30.06	-273.81	40.016287	-104.900537	1.94	71.26	93.00	-30.59	-45.00	-10.41	
3223.00	18.01	273.14	3186.86	32.17	-302.27	40.016292	-104.900638	1.02	313.37	94.00	-32.81	-47.30	-12.70	
3316.00	16.45	271.68	3275.68	33.35	-329.79	40.016296	-104.900736	1.74	194.80	93.00	-34.08	-49.00	-13.61	
3410.00	16.24	274.34	3365.88	34.73	-356.20	40.016299	-104.900831	0.83	106.94	94.00	-35.56	-50.12	-11.38	
3503.00	15.46	276.57	3455.35	37.14	-381.48	40.016306	-104.900921	1.06	143.08	93.00	-38.06	-50.30	-10.57	
3596.00	16.08	275.12	3544.85	39.70	-406.62	40.016313	-104.901011	0.79	326.86	93.00	-40.72	-49.67	-13.03	
3690.00	15.32	276.87	3635.34	42.35	-431.92	40.016320	-104.901101	0.95	148.91	94.00	-43.46	-49.58	-12.90	
3783.00	14.06	274.43	3725.30	44.69	-455.38	40.016327	-104.901185	1.51	204.98	93.00	-45.89	-46.86	-16.06	
3869.00	13.10	275.30	3808.89	46.40	-475.50	40.016331	-104.901257	1.14	168.41	86.00	-47.67	-43.45	-16.15	
3954.00	13.95	272.90	3891.54	47.81	-495.32	40.016335	-104.901327	1.20	325.39	85.00	-49.15	-39.11	-18.23	
4040.00	14.17	269.41	3974.96	48.22	-516.20	40.016336	-104.901402	1.02	282.85	86.00	-49.64	-35.08	-19.62	
4125.00	14.83	268.47	4057.25	47.83	-537.48	40.016335	-104.901478	0.82	339.92	85.00	-49.32	-32.63	-18.47	
4211.00	15.37	270.40	4140.28	47.61	-559.88	40.016335	-104.901558	0.86	43.89	86.00	-49.19	-31.89	-15.94	
4296.00	15.83	274.12	4222.15	48.52	-582.71	40.016337	-104.901639	1.30	67.11	85.00	-50.19	-32.21	-13.63	
4381.00	16.63	272.94	4303.77	49.98	-606.42	40.016341	-104.901724	1.02	337.03	85.00	-51.73	-32.27	-14.47	
4466.00	16.95	264.29	4385.16	49.37	-630.90	40.016340	-104.901812	2.96	273.14	85.00	-51.21	-31.15	-17.23	
4556.00	17.55	262.88	4471.11	46.38	-657.42	40.016331	-104.901906	0.81	324.45	90.00	-48.32	-33.06	-13.91	
4641.00	16.72	266.05	4552.34	43.95	-682.33	40.016325	-104.901995	1.47	133.13	85.00	-45.98	-35.58	-8.58	
4727.00	14.49	267.90	4635.16	42.71	-705.43	40.016321	-104.902078	2.66	168.31	86.00	-44.82	-35.31	-4.95	
4812.00	13.96	273.52	4717.56	42.95	-726.29	40.016322	-104.902152	1.74	113.70	85.00	-45.13	-32.93	-0.76	
4897.00	13.35	278.48	4800.16	45.02	-746.23	40.016328	-104.902223	1.55	119.91	85.00	-47.28	-29.45	0.65	
4983.00	12.70	279.06	4883.95	47.98	-765.39	40.016336	-104.902292	0.77	168.91	86.00	-50.31	-25.10	-1.44	
5068.00	13.16	277.31	4966.79	50.68	-784.21	40.016343	-104.902359	0.71	318.74	85.00	-53.08	-20.57	-4.20	

5D Survey Report

Survey Points (Relative to centre, TVD relative to Drill Floor)															
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	Latitude (°)	-Longitude (°)	DLS (°/100 US ft)	T. Face (°)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment	
5153.00	11.22	277.01	5049.87	52.92	-802.02	40.016349	-104.902422	2.28	181.72	85.00	-55.38	-15.97	-5.90		
5239.00	8.53	278.77	5134.59	54.91	-816.63	40.016355	-104.902475	3.15	174.46	86.00	-57.43	-10.61	-7.17		
5324.00	8.34	280.01	5218.67	56.95	-828.93	40.016360	-104.902519	0.31	136.86	85.00	-59.51	-5.74	-8.93		
5409.00	7.55	281.32	5302.85	59.11	-840.48	40.016366	-104.902560	0.95	167.74	85.00	-61.72	-2.72	-10.83		
5495.00	6.45	281.45	5388.21	61.18	-850.75	40.016372	-104.902596	1.28	179.24	86.00	-63.83	-0.60	-12.67		
5580.00	5.09	284.19	5472.78	63.05	-859.09	40.016377	-104.902626	1.63	169.91	85.00	-65.73	0.16	-14.35		
5665.00	4.06	287.43	5557.51	64.88	-865.61	40.016382	-104.902650	1.25	167.53	85.00	-67.58	-0.09	-16.00		
5751.00	2.70	289.44	5643.35	66.47	-870.43	40.016386	-104.902667	1.59	176.02	86.00	-69.48	-0.84	-17.32		
5837.00	1.04	315.01	5729.31	67.69	-872.89	40.016390	-104.902676	2.11	165.70	86.00	-70.42	-8.97	-16.07		
6264.00	1.31	350.81	6156.22	75.25	-876.41	40.016411	-104.902688	0.18	88.31	427.00	-77.99	-24.63	-5.80		
6692.00	1.13	343.27	6584.13	84.12	-878.40	40.016435	-104.902695	0.06	218.00	428.00	-86.87	-32.73	-9.63		
7118.00	1.30	56.09	7010.05	90.84	-875.60	40.016453	-104.902685	0.34	120.98	426.00	-93.58	-24.93	32.45		
7202.00	1.28	53.06	7094.03	91.94	-874.06	40.016456	-104.902680	0.08	252.15	84.00	-94.67	-28.50	31.03		
7289.00	3.20	146.66	7180.98	90.45	-872.02	40.016452	-104.902672	4.09	116.54	87.00	-93.17	31.28	26.31		
7374.00	14.04	163.15	7264.90	78.52	-867.79	40.016420	-104.902657	12.91	18.60	85.00	-81.22	26.53	18.94		
7459.00	23.39	156.22	7345.32	52.92	-858.52	40.016349	-104.902624	11.15	348.04	85.00	-55.59	10.65	25.03		
7545.00	25.45	162.25	7423.63	19.47	-846.55	40.016257	-104.902581	3.08	40.81	86.00	-22.09	1.25	32.95		
7630.00	29.83	169.97	7498.94	-18.78	-837.29	40.016152	-104.902548	6.65	42.74	85.00	16.18	2.38	41.32		
7715.00	40.47	174.28	7568.35	-67.19	-830.84	40.016020	-104.902525	12.85	14.92	85.00	64.62	3.82	47.26		
7801.00	46.78	171.51	7630.57	-126.02	-823.42	40.015858	-104.902495	7.66	342.13	86.00	123.47	0.55	54.15		
7886.00	57.74	177.39	7682.55	-192.79	-817.19	40.015675	-104.902477	14.00	24.85	85.00	190.27	2.82	60.16		
7972.00	55.86	179.23	7723.16	-268.48	-815.01	40.015467	-104.902469	9.63	11.74	86.00	265.97	0.34	62.02		
8057.00	58.29	182.90	7756.27	-346.73	-816.48	40.015252	-104.902474	4.90	55.01	85.00	344.21	3.09	60.14		
8142.00	77.82	187.47	7781.03	-427.58	-823.90	40.015030	-104.902501	12.33	25.35	85.00	425.03	8.37	51.92		
8201.00	87.27	187.22	7788.68	-485.54	-831.37	40.014871	-104.902527	16.02	358.48	59.00	482.96	8.15	44.42	7 in	
8266.00	88.31	186.06	7791.19	-550.05	-838.88	40.014694	-104.902554	2.39	311.78	65.00	547.45	9.30	36.89		
8361.00	89.82	184.37	7792.74	-644.64	-847.52	40.014434	-104.902585	2.39	311.83	95.00	642.00	10.79	28.05		
8446.00	90.26	183.53	7792.68	-729.44	-853.37	40.014202	-104.902606	1.12	297.65	85.00	726.78	10.75	21.94		
8532.00	91.23	182.70	7791.56	-815.30	-858.04	40.013966	-104.902622	1.48	319.45	86.00	812.62	9.65	16.98		
8617.00	90.43	183.05	7790.33	-900.18	-862.31	40.013793	-104.902638	1.03	156.37	85.00	897.49	8.47	12.42		
8703.00	90.80	181.59	7789.41	-986.11	-865.79	40.013497	-104.902650	1.75	284.23	86.00	983.40	7.59	8.64		
8788.00	90.18	181.49	7788.68	-1071.07	-868.07	40.013264	-104.902658	0.74	189.16	85.00	1068.36	6.90	6.05		
8873.00	89.82	179.65	7788.68	-1156.06	-868.92	40.013030	-104.902661	2.21	258.93	85.00	1153.34	6.94	4.91		
8958.00	91.23	180.05	7787.90	-1241.06	-868.69	40.012797	-104.902660	1.72	15.84	85.00	1238.34	6.19	4.83		
9043.00	90.25	179.77	7786.81	-1326.05	-868.56	40.012564	-104.902660	1.20	195.95	85.00	1323.33	5.13	4.65		
9128.00	90.12	179.49	7786.53	-1411.05	-868.01	40.012330	-104.902658	0.36	245.10	85.00	1408.33	4.89	4.90		
9214.00	92.22	180.76	7784.77	-1497.02	-868.20	40.012094	-104.902659	2.85	31.15	86.00	1494.30	3.17	4.40		
9299.00	92.12	180.88	7781.56	-1581.95	-869.42	40.011861	-104.902663	0.18	129.82	85.00	1579.23	-0.01	2.88		
9385.00	91.42	180.25	7778.90	-1667.91	-870.26	40.011625	-104.902666	1.09	221.98	86.00	1665.18	-2.63	1.73		
9470.00	91.05	179.63	7777.07	-1752.89	-870.17	40.011392	-104.902666	0.85	239.17	85.00	1750.16	-4.43	1.51		
9556.00	90.62	178.53	7775.81	-1838.86	-868.79	40.011156	-104.902661	1.37	248.66	86.00	1836.14	-5.64	2.58		

5D Survey Report

Survey Points (Relative to centre, TVD relative to Drill Floor)																	
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	T. Face (°)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment			
9642.00	89.20	177.63	7775.95	-1924.81	-865.91	40.010920	-104.902650	1.95	212.37	86.00	1922.10	-5.48	5.15				
9728.00	89.26	176.94	7777.11	-2010.71	-861.84	40.010684	-104.902636	0.81	274.97	86.00	2008.01	-4.29	8.91				
9813.00	90.92	176.09	7776.97	-2095.62	-858.15	40.010451	-104.902623	2.38	34.71	85.00	2092.94	-4.37	12.30				
9898.00	90.49	177.33	7775.93	-2180.55	-854.76	40.010218	-104.902611	1.03	240.50	85.00	2177.87	-5.38	15.38				
9984.00	90.26	176.83	7775.36	-2266.43	-850.38	40.009982	-104.902595	0.64	245.30	86.00	2263.78	-5.91	19.44				
10069.00	90.00	177.87	7775.17	-2351.34	-846.45	40.009749	-104.902581	1.26	104.03	85.00	2348.70	-6.07	23.08				
10154.00	88.27	178.03	7776.45	-2436.27	-843.41	40.009516	-104.902570	2.04	174.72	85.00	2433.64	-4.78	25.82				
10240.00	90.49	178.09	7777.38	-2522.21	-840.50	40.009280	-104.902560	2.58	1.55	86.00	2519.59	-3.78	28.42				
10325.00	89.32	176.93	7777.52	-2607.18	-838.28	40.009047	-104.902552	1.69	144.32	85.00	2604.57	-3.62	30.34				
10411.00	89.38	178.96	7778.50	-2693.16	-836.70	40.008811	-104.902546	0.08	26.56	86.00	2690.55	-2.61	31.61				
10496.00	89.26	180.65	7779.51	-2778.15	-836.41	40.008577	-104.902545	1.99	94.07	85.00	2775.54	-1.55	31.60				
10581.00	90.56	179.96	7779.64	-2863.15	-836.86	40.008344	-104.902547	1.73	332.04	85.00	2860.54	-1.39	30.84				
10667.00	89.63	179.53	7779.50	-2949.15	-836.48	40.008108	-104.902545	1.19	204.81	86.00	2946.54	-1.49	30.92				
10752.00	87.78	180.05	7781.42	-3034.12	-836.17	40.007875	-104.902544	2.26	164.31	85.00	3031.51	0.47	30.92				
10837.00	89.44	180.85	7783.48	-3119.09	-836.84	40.007641	-104.902546	2.17	25.73	85.00	3116.48	2.57	29.95				
10923.00	90.49	182.62	7783.54	-3205.95	-839.44	40.007406	-104.902556	2.39	59.33	86.00	3202.42	2.64	27.01				
11008.00	89.88	182.24	7783.26	-3289.97	-835.07	40.007172	-104.902569	0.85	211.92	85.00	3287.33	2.41	23.11				
11093.00	89.08	180.61	7784.03	-3374.94	-845.16	40.006939	-104.902576	2.14	243.85	85.00	3372.29	3.22	20.71				
11179.00	91.17	182.32	7783.84	-3460.90	-847.36	40.006703	-104.902584	3.14	39.29	86.00	3458.24	3.05	18.19				
11264.00	90.74	181.66	7782.43	-3545.84	-850.31	40.006470	-104.902594	0.93	236.92	85.00	3543.17	1.68	14.95				
11349.00	90.00	180.95	7781.88	-3630.81	-852.24	40.006237	-104.902601	1.21	223.82	85.00	3628.14	1.17	12.71				
11435.00	88.64	180.04	7782.90	-3716.80	-852.99	40.006001	-104.902604	1.90	213.78	86.00	3714.12	2.23	11.66				
11520.00	88.83	181.16	7784.78	-3801.77	-853.88	40.005767	-104.902607	1.34	80.38	85.00	3799.09	4.15	10.46				
11606.00	89.44	180.05	7786.07	-3887.76	-854.79	40.005531	-104.902610	1.47	298.78	86.00	3885.07	5.48	9.25				
11691.00	89.51	180.66	7786.85	-3972.75	-855.31	40.005298	-104.902612	0.72	83.46	85.00	3970.06	6.29	8.42				
11776.00	90.00	182.62	7787.22	-4057.71	-857.74	40.005065	-104.902621	2.38	75.97	85.00	4055.01	6.69	5.68				
11861.00	89.38	182.93	7787.68	-4142.61	-861.86	40.004832	-104.902636	0.82	153.44	85.00	4139.90	7.18	1.26				
11947.00	89.08	181.86	7788.83	-4228.52	-865.45	40.004596	-104.902648	1.29	254.33	86.00	4225.80	8.37	-2.64				
12032.00	89.38	182.62	7789.98	-4313.45	-868.78	40.004363	-104.902660	0.96	68.46	85.00	4310.71	9.55	-6.26				
12117.00	89.07	182.15	7791.12	-4398.37	-872.31	40.004130	-104.902673	0.66	236.59	85.00	4395.62	10.73	-10.10				
12203.00	88.46	182.15	7792.98	-4484.29	-875.54	40.003894	-104.902684	0.71	180.00	86.00	4481.52	12.61	-13.63				
12288.00	89.44	180.38	7794.54	-4569.25	-877.41	40.003661	-104.902691	2.38	298.96	85.00	4566.48	14.22	-15.82				
12374.00	89.14	178.94	7795.60	-4655.24	-876.90	40.003424	-104.902689	1.71	258.22	86.00	4652.47	15.33	-15.61				
12459.00	88.50	178.59	7797.35	-4740.20	-875.07	40.003191	-104.902683	0.86	208.66	85.00	4737.43	17.11	-14.09				
12545.00	88.95	176.09	7799.27	-4826.14	-872.58	40.002955	-104.902674	0.78	311.99	86.00	4823.39	19.06	-11.90				
12631.00	88.40	177.76	7801.25	-4912.06	-869.47	40.002719	-104.902663	0.75	210.95	86.00	4909.32	21.09	-9.10				
12716.00	89.88	178.77	7802.53	-4997.01	-866.89	40.002486	-104.902654	2.11	34.32	85.00	4994.27	22.40	-6.83				
12801.00	91.05	179.42	7801.84	-5082.00	-865.55	40.002253	-104.902649	1.57	29.05	85.00	5079.26	21.74	-5.79				
12886.00	89.32	176.89	7801.57	-5166.98	-864.30	40.002020	-104.902644	2.13	197.03	85.00	5164.25	21.50	-4.85				
12956.00	89.82	179.30	7802.09	-5236.97	-863.19	40.001828	-104.902640	0.92	39.35	70.00	5234.25	22.06	-3.99	LAST WFT MWD SURVEY			

5D Survey Report

Survey Points (Relative to centre, TVD relative to Drill Floor)														
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	T. Face (°)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment
13010.00	89.82	179.30	7802.26	-5290.97	-862.53	40.001679	-104.902638	0.00	0.00	54.00	5288.24	22.25	-3.52	PROJECTION TO TD
Formation Points (Relative to centre, TVD relative to Drill Floor)														
Name						MP (US ft)		TVD (US ft)						
FOX HILLS BASE														
SUSSEX						744.01		744.00						
SHANNON						4934.84		4837.00						
N100_A_CK						5432.34		5326.00						
N460_B_UM						7459.74		7346.00						
N700_C_CK						7652.29		7518.00						
FRHS						7771.54		7610.00						
CDLL						8048.20		7753.00						
CODELL						8105.29		7772.00						
						8124.31		7777.00						