



Weatherford®

Plan Data for DC FARMS 34N-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:  
Northing: 1249319.07USFT Latitude: 40.016205°  
Easting: 3168144.48USFT Longitude: -104.899666°  
North Reference: True Grid Convergence: 0.39°  
Elevation Above VRD: 5007.00USFT

Slot: DC FARMS 34N-33HZ  
Position:  
Offset is from Site centre  
+N/-S: -0.00USFT Northing: 1249319.07USFT Latitude: 40.016205°  
+E/-W: -0.00USFT Easting: 3168144.48USFT Longitude: -104.899666°  
Elevation Above VRD: 5007.00USFT

Well: DC FARMS 34N-33HZ  
Type: Main-Well  
File Number:  
Vertical Section: Position offset of origin from Slot centre:  
+N/-S: 0.00USFT Azimuth: 179.80°  
+E/-W: 0.00USFT  
Magnetic Parameters:  
Model: Field Strength: Declination: Dip: Date:  
BGM 52648(NT) 8.64° 66.63° 2013-09-04

Survey Point Information:

DogLeg Severity Unit: %/100.00ft

MD	Inc	Az	TVD
(USFt)	(°)	(°)	(USFt)
970.00	0.50	336.11	969.99
1085.00	0.78	325.98	1084.98
12653.00	89.01	177.25	7543.80
12705.00	89.01	177.25	7544.69

Survey Data for DC FARMS 34N-33HZ

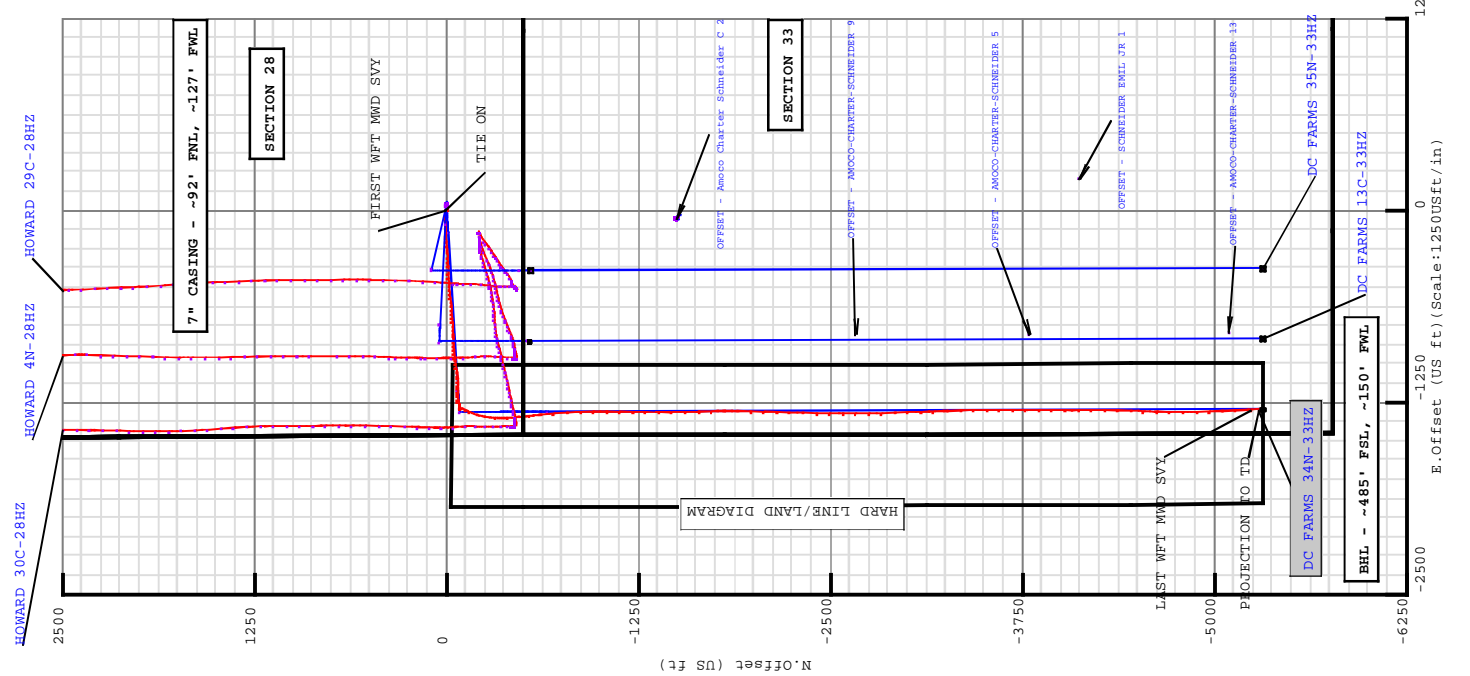
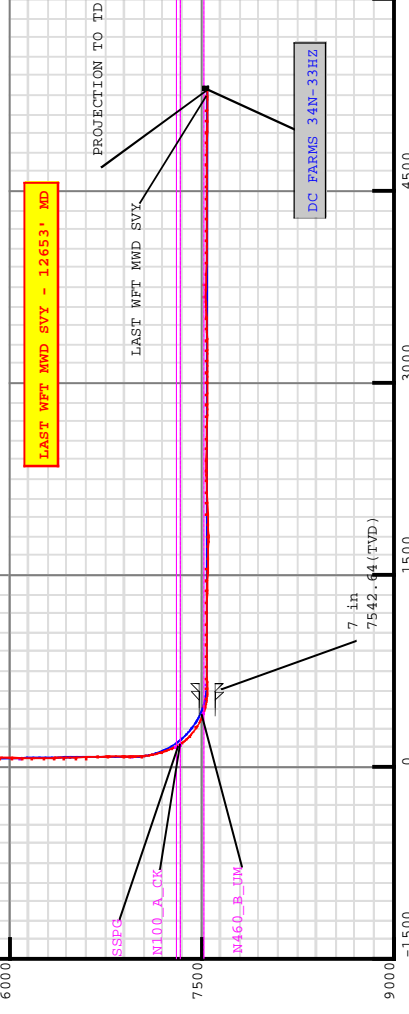
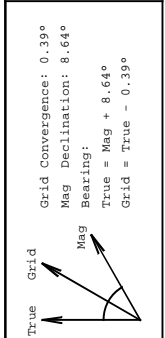
Casing Point Information:

Name	MD	TVD
(USFT)	(USFT)	(USFT)
7 in 7999.80	7542.64	

Survey Data for DC FARMS 34N-33HZ

Casing Point Information:

Name	MD	TVD
(USFT)	(USFT)	(USFT)
7 in 7999.80	7542.64	





**5D Survey Report**

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**Anadarko Petroleum**

**Field Name:** WATTENBERG\_ANADARKO\_NAD 83  
**Site Name:** DC FARMS 13C-33HZ PAD  
**Well Name:** DC FARMS 34N-33HZ  
**Survey:** Definitive Survey

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DEFINITIVE SURVEYS FOR THE DC FARMS 34N-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 34N-33HZ	Position ( Offsets relative to Site Centre )		
	+N / -S : -0.00 US ft +E / -W : -0.00 US ft	Northing :1249319.07 US ft Easting :3168144.48 US ft	Latitude : 40.016205 Longitude : -104.899666
	Slot TVD Reference : Ground Elevation Elevation above : 5007.00 US ft Comment :		
Well Name  DC FARMS 34N-33HZ	Type : Main well		
	Rig Height Relative to : 5023.00 US ft	Drill Floor : 16.00 US ft	
	Closure Distance : 5447.13 US ft	Vertical Section (Position of Origin Relative to Slot ) +N / -S : 0.00 US ft +E / -W : 0.00 US ft Az :179.79°	

Target Set	
Name : DC FARMS 34N      Number of Targets : 1	
Comment :	
TargetName: PBHL Shape: Cuboid	Position (Relative to centre) Northing : 1243993.55 US ft Easting : 3166891.55US ft Latitude : 40°0'5.792400" Longitude : -104°54'15.361200"
Orientation Dimensions	TVD (Drill Floor) : 7541.00 US ft Azimuth : 0.00° Length : 20.00 US ft Inclination : 0.00° Breadth : 20.00 US ft Height : 20.00 US ft

Survey Name :Definitive Survey						
Date : 04/Sep/2013		Survey Tool :		Comment :		
Magnetic Model						
Model Name: BGGM		Date: 04/Sep/2013	Field Strength: 52648.5 nT		Declination: 8.64°	
Survey Tool Ranges						
Name		Start MD (us ft)		End MD (us ft)		Source Survey
NSG Static GMS		0.00		970.00		SURFACE GYRO SURVEYS
MWD		970.00		12705.00		WFT MWD SURVEYS
Casing Points (Relative to centre, TVD relative to Drill Floor )						
Name	MD (us ft)	Inc (°)	Az (°)	TVD (us ft)	N.Offset (us ft)	E.Offset (us ft)
7 in	7993.80	89.33	174.21	7542.64	-590.37	-1328.41
					40.014584	-104.904409
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)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	40.016205	-104.899666	0.00	0.00	0.00	0.00	0.00	0.00	2
16.00	0.00	0.00	16.00	0.00	0.00	40.016205	-104.899666	0.00	0.00	16.00	0.00	0.00	0.00	
116.00	0.07	24.97	116.00	0.06	0.03	40.016205	-104.899666	0.07	24.97	100.00	-0.05	-0.06	0.00	
216.00	0.10	42.61	216.00	0.17	0.11	40.016205	-104.899666	0.04	50.14	100.00	-0.17	-0.20	0.04	
316.00	0.30	121.47	316.00	0.10	0.39	40.016205	-104.899665	0.30	98.13	100.00	-0.10	-0.28	0.29	
416.00	0.34	9.06	416.00	0.26	0.66	40.016206	-104.899664	0.53	216.19	100.00	-0.26	-0.36	-0.61	
516.00	0.21	22.11	516.00	0.72	0.78	40.016207	-104.899663	0.14	160.70	100.00	-0.72	-0.96	-0.45	
616.00	0.48	28.46	616.00	1.26	1.05	40.016208	-104.899662	0.27	11.24	100.00	-1.25	-1.61	-0.32	
716.00	0.45	15.53	715.99	2.01	1.35	40.016211	-104.899661	0.11	247.64	100.00	-2.00	-2.29	-0.77	
816.00	0.33	359.62	815.99	2.67	1.46	40.016212	-104.899661	0.16	214.29	100.00	-2.67	-2.66	-1.47	
916.00	0.46	335.35	915.99	3.33	1.29	40.016214	-104.899661	0.21	295.29	100.00	-3.32	-2.49	-2.56	
970.00	0.50	336.11	969.99	3.74	1.10	40.016215	-104.899662	0.08	9.42	54.00	-3.73	-2.97	-2.52	TIE ON
1085.00	0.78	325.98	1084.98	4.85	0.46	40.016218	-104.899664	0.26	332.88	115.00	-4.84	-3.76	-3.09	FIRST WFT MWD SVY
1179.00	2.48	283.54	1178.94	5.85	-1.88	40.016221	-104.899673	2.10	302.12	94.00	-5.86	-3.19	-5.25	
1273.00	4.45	274.36	1272.76	6.61	-7.49	40.016223	-104.899693	2.17	339.66	94.00	-6.63	-7.95	-6.02	
1367.00	4.15	278.54	1366.50	7.39	-14.49	40.016225	-104.899718	0.46	135.82	94.00	-7.44	-15.39	-5.15	
1461.00	3.68	278.42	1460.28	8.33	-20.84	40.016228	-104.899740	0.50	180.94	94.00	-8.41	-21.79	-5.19	
1555.00	5.08	275.04	1554.00	9.14	-27.97	40.016230	-104.899766	1.51	347.86	94.00	-9.24	-28.55	-6.65	
1680.00	4.84	275.02	1678.53	10.09	-38.73	40.016233	-104.899804	0.19	180.40	125.00	-10.23	-39.33	-6.66	
1805.00	4.61	274.86	1803.11	10.98	-48.99	40.016235	-104.899841	0.18	183.20	125.00	-11.15	-49.59	-6.79	
1929.00	4.44	274.12	1926.72	11.74	-58.74	40.016237	-104.899876	0.14	198.58	124.00	-11.96	-59.26	-7.49	
2024.00	4.18	274.71	2021.45	12.29	-65.86	40.016239	-104.899901	0.28	170.62	95.00	-12.53	-66.43	-6.85	
2115.00	4.90	261.05	2112.17	11.96	-73.01	40.016238	-104.899927	1.42	296.72	91.00	-12.23	-67.95	-22.96	
2206.00	6.95	263.40	2202.68	10.72	-82.32	40.016234	-104.899960	2.27	7.92	91.00	-11.02	-73.10	-19.72	

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
2297.00	7.97	266.45	2292.91	9.70	-94.08	40.016232	-104.900002	1.20	22.73	91.00	-10.04	-77.82	-15.53	
2388.00	8.71	270.17	2382.95	9.33	-107.27	40.016231	-104.900049	1.01	37.95	91.00	-9.72	-80.88	-10.81	
2480.00	9.41	270.98	2473.80	9.48	-121.76	40.016231	-104.900101	0.77	10.73	92.00	-9.92	-81.41	-10.75	
2572.00	11.26	264.44	2564.30	8.74	-138.22	40.016229	-104.900155	2.38	324.37	92.00	-9.24	-79.00	-20.09	
2665.00	12.57	265.97	2655.30	7.15	-157.35	40.016225	-104.900228	1.45	14.31	93.00	-7.72	-78.30	-17.63	
2757.00	13.59	264.78	2744.91	5.46	-178.10	40.016220	-104.900302	1.15	344.63	92.00	-6.11	-75.55	-18.75	
2850.00	14.46	262.31	2835.14	2.91	-200.49	40.016213	-104.900382	1.14	324.27	93.00	-3.64	-70.78	-20.43	
2943.00	14.85	263.56	2925.11	0.02	-223.84	40.016205	-104.900465	0.54	39.64	93.00	-0.84	-66.11	-17.30	
3036.00	15.21	265.91	3014.93	-2.19	-247.85	40.016199	-104.900551	0.76	60.57	93.00	1.28	-62.15	-13.99	
3130.00	16.12	265.93	3105.44	-3.99	-273.17	40.016194	-104.900641	0.97	0.35	94.00	2.99	-58.58	-13.74	
3223.00	17.79	267.09	3194.40	-5.63	-300.24	40.016190	-104.900738	1.83	12.01	93.00	4.53	-57.38	-12.71	
3316.00	18.73	267.19	3282.71	-7.08	-329.34	40.016186	-104.900842	1.01	1.96	93.00	5.88	-58.03	-13.00	
3410.00	15.76	266.39	3372.48	-8.63	-357.16	40.016181	-104.900941	3.17	184.18	94.00	7.32	-56.80	-13.99	
3504.00	15.30	266.99	3463.04	-10.08	-382.28	40.016177	-104.901031	0.52	161.04	94.00	8.68	-53.08	-13.60	
3597.00	17.37	268.30	3552.28	-11.14	-408.42	40.016174	-104.901124	2.26	10.72	93.00	9.64	-50.94	-13.12	
3690.00	16.89	265.57	3641.16	-12.59	-435.76	40.016170	-104.901222	1.01	237.87	93.00	11.00	-49.07	-15.68	
3784.00	16.61	266.84	3731.17	-14.39	-462.79	40.016165	-104.901318	0.49	128.02	94.00	12.69	-47.55	-14.58	
3869.00	18.52	268.46	3812.21	-15.42	-488.42	40.016163	-104.901410	2.32	15.13	85.00	13.63	-47.49	-13.90	
3955.00	18.77	265.77	3893.69	-16.81	-515.87	40.016159	-104.901508	1.04	284.93	86.00	14.92	-47.98	-16.37	
4040.00	17.17	263.11	3974.55	-19.32	-541.97	40.016152	-104.901601	2.12	205.89	85.00	17.34	-47.38	-17.62	
4126.00	19.10	260.94	4056.27	-23.06	-568.47	40.016142	-104.901696	2.38	339.68	86.00	20.98	-47.22	-17.30	
4211.00	18.17	261.45	4136.81	-27.22	-595.31	40.016130	-104.901791	1.11	170.30	85.00	25.04	-48.60	-14.54	
4297.00	17.49	265.51	4218.69	-30.23	-621.45	40.016122	-104.901885	1.65	120.60	86.00	27.95	-49.38	-9.89	
4382.00	17.63	267.02	4299.73	-31.90	-647.04	40.016117	-104.901976	0.56	73.64	85.00	29.53	-49.15	-8.61	
4468.00	18.23	266.13	4381.55	-33.48	-673.47	40.016113	-104.902071	0.77	335.03	86.00	31.02	-49.11	-9.43	
4553.00	18.50	263.63	4462.22	-35.88	-700.14	40.016106	-104.902166	0.98	287.73	85.00	33.31	-49.42	-10.79	
4638.00	17.23	265.48	4543.12	-38.36	-726.09	40.016100	-104.902258	1.64	156.80	85.00	35.70	-49.72	-8.43	
4724.00	15.84	268.24	4625.56	-39.73	-750.52	40.016096	-104.902346	1.86	151.85	86.00	36.98	-48.03	-6.39	
4809.00	15.13	266.21	4707.48	-40.82	-773.18	40.016093	-104.902427	1.05	216.38	85.00	37.99	-44.22	-8.34	
4895.00	15.09	268.48	4790.51	-41.86	-795.57	40.016090	-104.902506	0.69	94.96	86.00	38.94	-40.38	-7.20	
4980.00	17.78	270.25	4872.03	-42.09	-819.62	40.016089	-104.902592	3.22	11.40	85.00	39.09	-38.54	-7.43	
5065.00	21.24	266.41	4952.14	-43.00	-847.97	40.016087	-104.902694	4.34	337.84	85.00	39.89	-40.32	-10.76	
5151.00	18.53	266.32	5033.00	-44.85	-877.16	40.016082	-104.902798	3.15	180.60	86.00	41.64	-43.40	-10.82	
5236.00	16.49	266.43	5114.06	-46.47	-902.68	40.016077	-104.902889	2.40	179.12	85.00	43.17	-42.88	-10.74	
5322.00	16.83	263.23	5196.45	-48.70	-927.23	40.016071	-104.902977	1.14	288.80	86.00	45.30	-40.45	-12.24	
5407.00	16.07	262.62	5277.97	-51.66	-951.11	40.016063	-104.903062	0.92	192.51	85.00	48.18	-38.26	-11.08	
5492.00	16.33	262.46	5359.60	-54.74	-974.63	40.016055	-104.903146	0.31	350.18	85.00	51.17	-35.82	-9.43	
5578.00	16.78	260.63	5442.03	-58.35	-998.86	40.016045	-104.903232	0.80	309.91	86.00	54.69	-33.67	-8.26	
5663.00	17.34	260.17	5523.29	-62.51	-1023.45	40.016033	-104.903320	0.68	346.23	85.00	58.76	-32.56	-5.80	
5749.00	15.78	261.75	5605.72	-66.38	-1047.65	40.016023	-104.903406	1.89	164.65	86.00	62.54	-30.79	-2.47	
5834.00	15.32	263.03	5687.61	-69.40	-1070.23	40.016014	-104.903487	0.68	143.89	85.00	65.47	-27.43	-0.04	

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
5919.00	14.20	264.02	5769.80	-71.85	-1091.75	40.016008	-104.903564	1.35	167.79	85.00	67.84	-22.82	1.67	
6005.00	14.40	265.11	5853.14	-73.86	-1112.90	40.016002	-104.903639	0.39	53.92	86.00	69.78	-17.45	2.87	
6090.00	13.35	268.95	5935.66	-74.94	-1133.24	40.015999	-104.903712	1.64	140.60	85.00	70.78	-11.31	3.51	
6176.00	13.05	273.19	6019.39	-74.58	-1152.86	40.016000	-104.903782	1.18	109.27	86.00	70.35	-4.20	1.91	
6261.00	12.86	272.55	6102.23	-73.62	-1171.89	40.016003	-104.903850	0.28	216.75	85.00	69.33	2.85	-1.04	
6347.00	12.05	270.88	6186.20	-73.06	-1190.43	40.016004	-104.903916	1.03	203.16	86.00	68.70	9.17	-3.18	
6432.00	11.98	267.02	6269.34	-73.38	-1208.11	40.016003	-104.903975	0.95	263.14	85.00	68.96	13.81	-3.42	
6517.00	11.06	262.61	6352.63	-74.89	-1225.01	40.015999	-104.904040	1.50	221.60	85.00	70.40	16.65	-1.78	
6603.00	9.08	260.46	6437.30	-77.08	-1239.88	40.015993	-104.904093	2.34	189.69	86.00	72.53	18.87	0.31	
6688.00	6.47	257.94	6521.51	-79.19	-1251.18	40.015988	-104.904133	3.10	186.19	85.00	74.60	21.75	2.98	
6774.00	6.34	254.93	6606.98	-81.44	-1260.50	40.015981	-104.904166	0.42	247.34	86.00	76.82	23.94	6.28	
6859.00	5.20	253.31	6691.54	-83.76	-1268.73	40.015975	-104.904196	1.35	187.33	85.00	79.11	24.45	8.98	
6944.00	2.45	259.57	6776.35	-85.20	-1274.20	40.015971	-104.904215	3.27	174.48	85.00	80.53	26.53	7.52	
7065.00	0.49	329.04	6897.31	-85.22	-1277.01	40.015971	-104.904225	1.92	168.61	121.00	80.54	17.47	-24.68	
7115.00	0.30	354.00	6947.30	-84.91	-1277.14	40.015972	-104.904226	0.50	149.86	50.00	80.23	5.12	-30.43	
7200.00	5.52	219.32	7032.18	-87.85	-1279.75	40.015964	-104.904235	6.75	223.20	85.00	83.16	17.02	22.48	
7286.00	12.74	201.74	7117.05	-99.88	-1285.90	40.015931	-104.904257	8.91	330.01	86.00	95.17	11.00	19.30	
7371.00	20.20	204.72	7198.50	-121.95	-1295.52	40.015870	-104.904291	8.83	7.90	85.00	117.20	13.53	7.55	
7456.00	27.92	205.86	7276.06	-153.23	-1310.36	40.015784	-104.904344	9.10	3.97	85.00	148.43	15.28	-8.96	
7542.00	36.00	197.45	7349.00	-195.55	-1326.75	40.015668	-104.904403	10.71	327.51	86.00	190.69	20.43	-24.32	
7627.00	48.73	190.11	7411.71	-251.09	-1339.91	40.015516	-104.904450	16.05	335.97	85.00	246.18	25.18	-35.52	
7713.00	58.09	183.11	7462.96	-319.57	-1347.59	40.015328	-104.904477	12.68	326.86	86.00	314.63	25.93	-41.27	
7798.00	57.53	177.17	7501.78	-395.04	-1347.61	40.015120	-104.904477	12.72	329.35	85.00	390.10	23.67	-40.25	
7883.00	75.93	173.45	7528.41	-475.39	-1340.95	40.014900	-104.904454	10.72	336.58	85.00	470.47	18.61	-33.58	
7945.00	83.76	173.74	7539.34	-535.99	-1334.15	40.014734	-104.904429	12.64	2.12	62.00	531.10	13.03	-27.38	7 in
7999.80	89.33	174.21	7542.64	-590.37	-1328.41	40.014584	-104.904405	10.21	4.81	54.80	585.50	7.35	-22.09	
8027.00	92.10	174.44	7542.30	-617.43	-1325.72	40.014510	-104.904395	10.21	4.78	27.20	612.57	4.50	-19.57	
8112.00	90.80	175.58	7540.15	-702.08	-1318.33	40.014278	-104.904373	2.03	138.74	85.00	697.24	1.12	-12.57	
8198.00	90.99	176.52	7538.80	-787.86	-1312.41	40.014042	-104.904352	1.11	78.56	86.00	783.05	-0.25	-6.98	
8283.00	90.68	178.09	7537.56	-872.76	-1308.41	40.013809	-104.904337	1.88	101.16	85.00	867.96	-1.51	-3.31	
8368.00	90.12	178.87	7536.97	-957.72	-1306.16	40.013576	-104.904329	1.13	125.67	85.00	952.93	-2.13	-1.36	
8454.00	88.68	180.35	7537.87	-1043.71	-1305.57	40.013340	-104.904327	2.40	134.22	86.00	1038.92	-1.26	-1.09	
8539.00	89.63	180.53	7539.12	-1128.70	-1306.23	40.013106	-104.904329	1.14	10.73	85.00	1123.90	-0.04	-2.06	
8625.00	90.00	181.24	7539.40	-1214.69	-1307.55	40.012870	-104.904334	0.93	62.48	86.00	1209.89	0.21	-3.70	
8710.00	89.75	181.11	7539.59	-1299.67	-1309.30	40.012637	-104.904340	0.33	207.47	85.00	1294.86	0.36	-5.75	
8795.00	88.46	180.54	7540.92	-1384.65	-1310.52	40.012404	-104.904345	1.66	203.83	85.00	1379.84	1.66	-7.29	
8881.00	87.71	179.65	7543.79	-1470.60	-1310.66	40.012168	-104.904345	1.35	229.85	86.00	1465.79	4.50	-7.75	
8966.00	89.12	178.77	7546.14	-1555.55	-1309.49	40.011935	-104.904341	1.96	328.03	85.00	1550.75	6.82	-6.89	
9052.00	88.40	177.80	7548.00	-1641.49	-1306.92	40.011699	-104.904332	1.40	233.40	86.00	1636.69	8.65	-4.62	
9137.00	88.77	177.95	7550.10	-1726.41	-1303.77	40.011466	-104.904321	0.47	22.06	85.00	1721.62	10.72	-1.79	
9223.00	90.62	179.40	7550.56	-1812.38	-1301.78	40.011230	-104.904313	2.73	38.09	86.00	1807.60	11.14	-0.11	

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
9308.00	92.04	180.66	7548.59	-1897.35	-1301.82	40.010996	-104.904314	2.23	41.56	85.00	1892.57	9.13	-0.47	
9393.00	91.91	181.79	7545.66	-1982.28	-1303.64	40.010763	-104.904320	1.34	96.55	85.00	1977.49	6.18	-2.59	
9479.00	92.04	181.69	7542.69	-2068.19	-1306.25	40.010527	-104.904329	0.19	322.45	86.00	2063.39	3.19	-5.52	
9564.00	92.28	181.67	7539.49	-2153.09	-1308.74	40.010294	-104.904338	0.28	355.24	85.00	2148.28	-0.04	-8.32	
9650.00	91.42	182.39	7536.71	-2238.99	-1311.79	40.010058	-104.904349	1.30	140.07	86.00	2234.17	-2.85	-11.67	
9735.00	90.06	180.87	7535.61	-2323.95	-1314.20	40.009825	-104.904358	2.40	228.19	85.00	2319.12	-3.99	-14.40	
9820.00	89.81	181.24	7535.71	-2408.93	-1315.77	40.009592	-104.904363	0.53	124.05	85.00	2404.10	-3.93	-16.28	
9906.00	88.89	181.21	7536.69	-2494.91	-1317.61	40.009356	-104.904370	1.07	181.87	86.00	2490.06	-2.99	-18.43	
9991.00	89.01	179.79	7538.24	-2579.89	-1318.35	40.009123	-104.904372	1.68	274.82	85.00	2575.04	-1.46	-19.49	
10077.00	88.71	179.70	7539.95	-2665.87	-1317.97	40.008887	-104.904371	0.36	196.70	86.00	2661.02	0.22	-19.42	
10162.00	89.63	179.76	7541.19	-2750.86	-1317.56	40.008653	-104.904370	1.08	3.73	85.00	2746.01	1.42	-19.33	
10247.00	88.46	178.45	7542.60	-2835.83	-1316.24	40.008420	-104.904365	2.07	228.22	85.00	2830.99	2.81	-18.31	
10333.00	89.08	178.01	7544.45	-2921.77	-1313.58	40.008184	-104.904355	0.88	324.64	86.00	2916.94	4.62	-15.96	
10418.00	89.88	177.35	7545.22	-3006.70	-1310.14	40.007951	-104.904343	1.22	320.47	85.00	3001.88	5.36	-12.83	
10503.00	90.06	179.12	7545.26	-3091.65	-1307.52	40.007718	-104.904334	2.09	84.19	85.00	3086.84	5.37	-10.53	
10588.00	90.43	177.35	7544.90	-3176.61	-1304.91	40.007485	-104.904324	2.13	281.81	85.00	3171.81	4.97	-8.22	
10674.00	91.66	178.19	7543.33	-3262.53	-1301.56	40.007249	-104.904312	1.73	34.32	86.00	3257.74	3.36	-5.19	
10759.00	91.42	177.61	7541.05	-3347.44	-1298.45	40.007016	-104.904301	0.74	247.52	85.00	3342.66	1.05	-2.39	
10845.00	91.60	179.19	7538.78	-3433.37	-1296.05	40.006780	-104.904293	1.85	83.48	86.00	3428.60	-1.25	-0.30	
10930.00	92.84	179.24	7535.49	-3518.30	-1294.88	40.006547	-104.904288	1.46	2.31	85.00	3513.53	-4.57	0.55	
11016.00	92.34	180.69	7531.60	-3604.21	-1294.83	40.006311	-104.904288	1.78	109.01	86.00	3599.44	-8.49	0.29	
11101.00	89.88	181.22	7529.96	-3689.17	-1296.25	40.006077	-104.904293	2.96	167.84	85.00	3684.40	-10.18	-1.43	
11186.00	88.40	179.96	7531.23	-3774.16	-1297.12	40.005844	-104.904296	2.29	220.40	85.00	3769.38	-8.93	-2.62	
11271.00	87.90	179.90	7533.98	-3859.11	-1297.02	40.005611	-104.904296	0.59	186.84	85.00	3854.33	-6.22	-2.82	
11357.00	88.77	179.73	7536.48	-3945.07	-1296.74	40.005375	-104.904295	1.03	348.95	86.00	3940.30	-3.76	-2.86	
11442.00	88.46	180.62	7538.53	-4030.05	-1297.00	40.005142	-104.904296	1.11	109.22	85.00	4025.27	-1.75	-3.43	
11527.00	90.19	179.37	7539.53	-4115.04	-1296.99	40.004908	-104.904296	2.51	324.14	85.00	4110.26	-0.78	-3.73	
11612.00	90.00	179.55	7539.39	-4200.03	-1296.19	40.004675	-104.904293	0.31	136.55	85.00	4195.25	-0.95	-3.24	
11698.00	89.94	180.64	7539.44	-4286.03	-1296.33	40.004439	-104.904294	1.27	93.15	86.00	4281.25	-0.94	-3.70	
11783.00	89.81	181.07	7539.62	-4371.02	-1297.60	40.004206	-104.904298	0.53	106.82	85.00	4366.24	-0.79	-5.27	
11869.00	90.06	181.55	7539.72	-4457.00	-1299.57	40.003970	-104.904305	0.63	62.49	86.00	4452.21	-0.73	-7.55	
11954.00	90.37	183.44	7539.40	-4541.91	-1303.27	40.003737	-104.904318	2.25	80.68	85.00	4537.11	-1.08	-11.54	
12039.00	90.99	181.04	7538.39	-4626.84	-1306.59	40.003503	-104.904330	2.92	284.50	85.00	4622.02	-2.12	-15.19	
12125.00	89.57	181.44	7537.97	-4712.81	-1308.45	40.003267	-104.904337	1.72	164.27	86.00	4707.99	-2.59	-17.36	
12210.00	90.37	180.63	7538.01	-4797.80	-1309.99	40.003034	-104.904342	1.34	314.64	85.00	4792.96	-2.58	-19.21	
12296.00	88.77	177.47	7538.66	-4883.77	-1308.56	40.002798	-104.904337	4.12	243.14	86.00	4878.94	-1.95	-18.08	
12381.00	88.21	177.83	7540.90	-4968.67	-1305.08	40.002565	-104.904325	0.78	147.28	85.00	4963.85	0.25	-14.92	
12466.00	89.26	177.39	7542.78	-5053.57	-1301.53	40.002332	-104.904312	1.34	337.26	85.00	5048.77	2.08	-11.68	
12552.00	90.25	176.92	7543.14	-5139.46	-1297.26	40.002096	-104.904297	1.27	334.60	86.00	5134.68	2.41	-7.72	
12653.00	89.01	177.25	7543.80	-5240.33	-1292.13	40.001819	-104.904278	1.27	165.10	101.00	5235.56	3.02	-2.96	LAST WFT MWD SV

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 (°)
12705.00	89.01	177.25	7544.69	-5292.26	-1289.63	40.001677	-104.904269	0.00	0.00
								CL (US ft)	VS (US ft)
								52.00	5287.50
								High to Plan (US ft)	Right to Plan (US ft)
								3.89	-0.66
									PROJECTION TO TD

Formation Points (Relative to centre, TVD relative to Drill Floor )									
Name									
FOX HILLS BASE									
SUSSEX									
SHANNON									
SSPG									
N100_A_CK									
N460_B_UM									
								MP (US ft)	TVD (US ft)
								743.01	743.00
								4942.29	4836.00
								5455.96	5325.00
								7495.08	7310.00
								7521.25	7332.00
								7838.67	7516.00