



Plan Data for CANNON 13C-10HZ

Field: WATTENBERG_ANADARKO_NAD 83

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

Slot: CANNON 13C-10HZ

Position:
Offset is from Site centre
+N/-S: -30.97USft Northing: 1301538.78USft Latitude: 40.158804°
+E/-W: 51.42USft Easting: 3204451.43USft Longitude: -104.768505°
Elevation Above VRD: 4949.00USft

Plan Point Information:

DogLeg Severity (USft)	Inc (°)	Az (°)	TVD (USft)	+N/-S (USft)	+E/-W (USft)	VSec (DLSU)	DLS Toolface (°)
906.00	0.10	24.76	905.98	3.47	-4.11	-3.51	166.8R
1100.00	0.10	24.76	1099.98	3.78	-3.97	-3.82	0.0R
1425.15	6.52	304.26	1424.42	14.44	-19.12	-14.60	2.00 81.4L
6184.40	6.52	304.26	6152.91	318.58	-465.69	-322.47	0.00 0.0R
6510.34	0.00	0.00	6478.14	329.01	-481.00	-333.03	2.00 180.0R
6810.33	0.00	0.00	6778.13	329.01	-481.00	-333.03	0.00 0.0R
7700.22	88.99	179.52	7351.00	-233.82	-476.32	229.83	10.00 179.5R
11896.11	88.99	179.52	7425.00	-4428.92	-441.40	4425.06	0.00 0.0R

Plan Data for CANNON 13C-10HZ

Formation Point Information:

Name	TVD Elevation (USft)	MD (USft)
FOX HILLS	0.00	4965.00
PARKMAN	3956.00	1009.00
SUSSEX	4363.00	602.00
SHARON SPRINGS	7102.00	-2137.00
NIORARA A	7171.00	-2206.00
NIORARA B CHALK	7267.00	-2302.00
NIORARA C	7326.00	-2361.00

Plan Data for CANNON 13C-10HZ

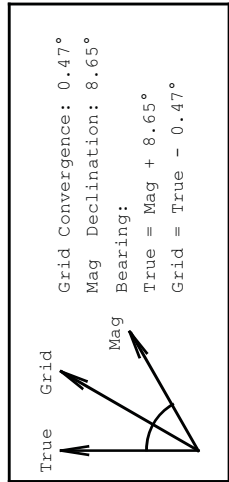
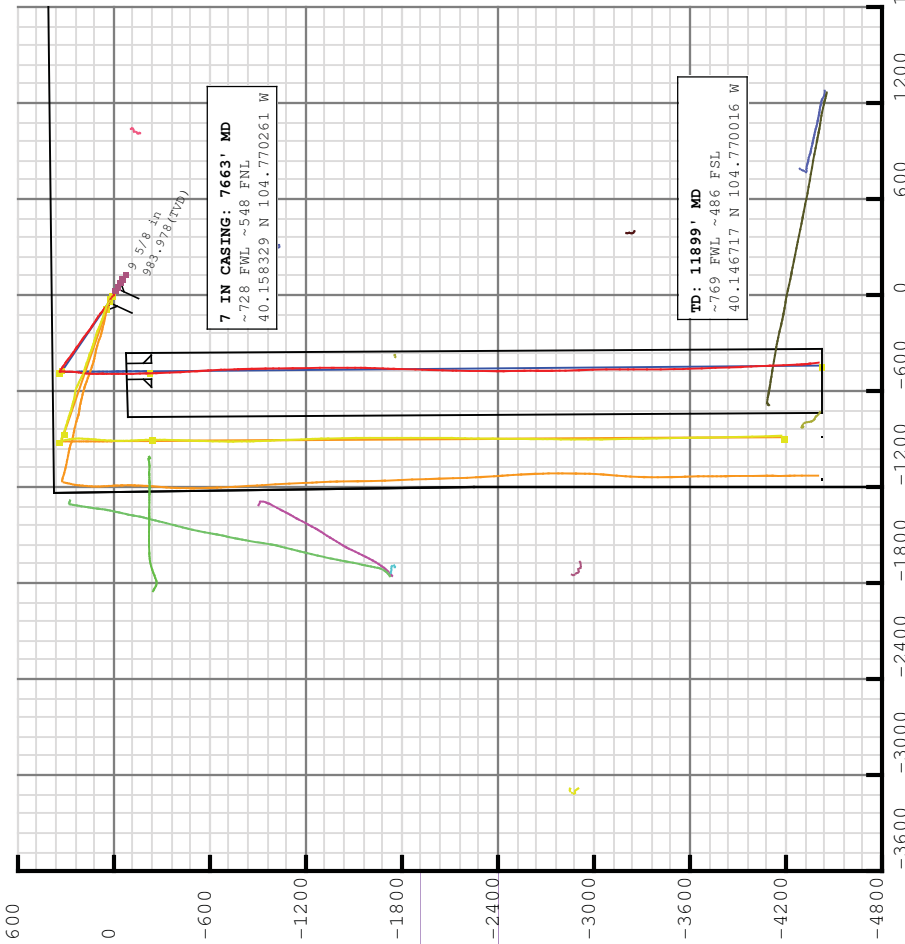
Casing Point Information:

Name	MD (USft)	TVD (USft)
9 5/8 in	984.00	983.98
7 in	7700.22	7351.00

Plan Data for CANNON 13C-10HZ

Target Set Information:

Name	TVD (USft)	Lat (°)	Long (°)	Shape
13C TARGET				
PBHL	7425.00	40.146646	-104.770084	Cuboid





FINAL SURVEYS





5D Survey Report

Anadarko Petroleum

Field Name: WATTENBERG_ANADARKO_NAD 83
Site Name: CANNON 29-10HZ
Well Name: CANNON 13C-10HZ
Survey: Definitive Survey



Weatherford®



Surveys for the CANNON 13C-10HZ

Site Name CANNON 29-10HZ	Units : US ft	North Reference : True	Convergence Angle : 0.47
	Position	Northing : 1301569.32 US ft Easting : 3204399.75 US ft	Latitude : 40.158889 Longitude : -104.768689
Elevation above: 4949.00 US ft			
Comment :			

Slot Name CANNON 13C-10HZ	Position (Offsets relative to Site Centre)		
	+N / -S : -30.97 US ft +E / -W : 51.42 US ft	Northing : 1301538.78 US ft Easting : 3204451.43 US ft	Latitude : 40.158804 Longitude : -104.768505
Slot TVD Reference : Ground Elevation			
Elevation above : 4949.00 US ft			
Comment :			

Well Name CANNON 13C-10HZ	Type : Main well	UWI :
	Rig Height Drill Floor : 16.00 US ft Relative to : 4965.00 US ft	Comment :
Closure Distance : 4423.36 US ft		Closure Azimuth : 185.479°
Vertical Section (Position of Origin Relative to Slot)		+E / -W : 0.00 US ft +N / -S : 0.00 US ft Az : 179.52°

Target Set

Name : 13C TARGET **Number of Targets :** 1

Comment :

TargetName: PBHL	Position (Relative to centre) Latitude : 40°8'47.925600" Longitude : -104°46'12.302400"
Shape: Cuboid	Northing : 1297106.37 US ft Easting : 3204046.57US ft
	TVD (Drill Floor) : 7425.00 US ft
Orientation	Azimuth : 0.00°
Dimensions	Length : 1.00 US ft Inclination : 0.00°
	Breadth : 1.00 US ft Height : 1.00 US ft

Survey Name : Definitive Survey

Date : 01/May/2013 **Survey Tool :** **Comment :** **Company :**

Magnetic Model

Model Name: Default **Date:** 04/Apr/2013 **Field Strength:** 50000.0 nT **Declination:** 0.00° **Dip:** 0.00°

Survey Tool Ranges

Name	Start MD (us ft)	End MD (us ft)	Source Survey
NSG Static GMS	0.00	906.00	SURFACE GYROS
MWD	906.00	11899.00	WFT MWD

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)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	Comment
7 in	7663.00	85.79	178.14	7351.23	-172.91	-490.77	3204451.43	3204451.43	40.158804	-104.768505	-104.770261

Well path created using minimum curvature

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	VS (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	1301538.78	3204451.43	40.158804	-104.768505	-0.00	
16.00	0.00	0.00	16.00	0.00	0.00	1301538.78	3204451.43	40.158804	-104.768505	-0.00	
116.00	0.26	268.75	116.00	-0.00	-0.23	1301538.77	3204451.20	40.158804	-104.768506	0.00	
216.00	0.36	284.64	216.00	0.07	-0.76	1301538.84	3204450.67	40.158804	-104.768508	-0.08	
316.00	0.55	298.35	316.00	0.38	-1.48	1301539.14	3204449.94	40.158805	-104.768510	-0.39	
416.00	0.53	298.91	415.99	0.83	-2.31	1301539.59	3204449.11	40.158806	-104.768513	-0.85	
516.00	0.39	293.91	515.99	1.19	-3.03	1301539.94	3204448.39	40.158807	-104.768516	-1.22	
616.00	0.43	331.07	615.98	1.66	-3.52	1301540.41	3204447.90	40.158809	-104.768518	-1.69	

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)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	VS (US ft)	Comment	
716.00	0.53	339.98	715.98	2.42	-3.86	1301541.17	3204447.55	40.158811	-104.768519	-2.45		
816.00	0.34	347.06	815.98	3.14	-4.08	1301541.89	3204447.32	40.158813	-104.768520	-3.18		
906.00	0.10	24.76	905.98	3.47	-4.11	1301542.22	3204447.29	40.158814	-104.768520	-3.51		
1051.00	0.36	307.16	1050.98	3.86	-4.42	1301542.61	3204446.98	40.158815	-104.768521	-3.90		
1142.00	2.18	331.18	1141.95	5.55	-5.48	1301544.29	3204445.90	40.158819	-104.768525	-5.60		
1233.00	4.60	310.70	1232.79	9.45	-9.09	1301548.16	3204442.27	40.158830	-104.768538	-9.53		
1324.00	6.18	312.10	1323.38	15.11	-15.49	1301553.77	3204435.82	40.158845	-104.768560	-15.24		
1413.00	7.13	294.55	1411.79	20.62	-24.07	1301559.20	3204427.19	40.158861	-104.768591	-20.82		
1523.00	6.96	292.78	1520.96	26.04	-36.42	1301584.52	3204414.80	40.158875	-104.768635	-26.34		
1616.00	6.44	300.81	1613.33	30.89	-46.10	1301569.29	3204405.08	40.158889	-104.768670	-31.28		
1709.00	6.77	303.19	1705.71	36.56	-55.16	1301574.89	3204395.97	40.158904	-104.768702	-37.02		
1802.00	6.67	300.45	1798.07	42.30	-64.41	1301580.55	3204386.68	40.158920	-104.768735	-42.84		
1895.00	6.56	311.24	1890.46	48.54	-73.06	1301586.72	3204377.98	40.158937	-104.768766	-49.15		
1988.00	6.30	309.60	1982.87	55.30	-80.98	1301593.41	3204369.99	40.158956	-104.768795	-55.97		
2082.00	5.88	307.34	2076.34	61.50	-88.79	1301599.55	3204362.14	40.158973	-104.768823	-62.25		
2175.00	5.75	309.71	2168.86	67.37	-96.16	1301605.35	3204354.72	40.158989	-104.768849	-68.17		
2268.00	5.28	309.04	2261.43	73.04	-103.06	1301610.97	3204347.77	40.159004	-104.768874	-73.90		
2362.00	6.36	313.77	2354.95	79.37	-110.18	1301617.24	3204340.60	40.159022	-104.768899	-80.29		
2456.00	6.45	312.95	2448.36	86.57	-117.81	1301624.37	3204332.91	40.159042	-104.768927	-87.55		
2550.00	6.55	303.97	2541.76	93.16	-126.12	1301630.90	3204324.55	40.159060	-104.768956	-94.21		
2643.00	6.17	305.80	2634.18	99.05	-134.57	1301636.71	3204316.05	40.159076	-104.768986	-100.17		
2737.00	6.41	300.09	2727.62	104.63	-143.21	1301642.23	3204307.36	40.159091	-104.769017	-105.83		
2830.00	7.91	302.44	2819.89	110.67	-153.10	1301648.18	3204297.42	40.159108	-104.769053	-111.95		
2924.00	7.68	303.65	2913.02	117.62	-163.79	1301655.04	3204286.68	40.159127	-104.769091	-118.99		
3017.00	7.50	301.87	3005.21	124.27	-174.12	1301661.61	3204276.29	40.159145	-104.769128	-125.72		
3111.00	7.23	302.52	3098.43	130.69	-184.31	1301667.94	3204266.04	40.159163	-104.769164	-132.23		
3204.00	7.03	303.18	3190.71	136.95	-194.01	1301674.12	3204256.30	40.159180	-104.769199	-138.57		
3298.00	6.32	301.72	3284.08	142.81	-203.23	1301679.91	3204247.03	40.159196	-104.769232	-144.51		
3383.00	5.84	303.32	3368.60	147.65	-210.82	1301684.69	3204239.40	40.159209	-104.769259	-149.41		
3468.00	6.65	307.01	3453.09	152.99	-218.36	1301689.96	3204231.81	40.159224	-104.769286	-154.81		
3553.00	6.12	308.21	3537.57	158.75	-225.85	1301695.67	3204224.27	40.159240	-104.769313	-160.64		
3639.00	5.49	308.91	3623.12	164.17	-232.66	1301701.03	3204217.43	40.159255	-104.769337	-166.12		
3724.00	5.43	309.65	3707.74	169.29	-238.92	1301706.10	3204211.12	40.159269	-104.769360	-171.29		
3810.00	4.83	309.88	3793.39	174.21	-244.83	1301710.97	3204205.17	40.159282	-104.769381	-176.26		
3895.00	5.29	309.39	3878.06	178.99	-250.60	1301715.70	3204199.36	40.159295	-104.769402	-181.09		
3981.00	5.98	306.08	3963.65	184.15	-257.29	1301720.80	3204192.63	40.159309	-104.769426	-186.30		
4066.00	6.27	303.87	4048.16	189.34	-264.72	1301725.93	3204185.16	40.159324	-104.769452	-191.55		
4152.00	6.87	305.29	4133.60	194.93	-272.82	1301731.45	3204177.01	40.159339	-104.769481	-197.21		
4237.00	6.78	304.69	4217.99	200.72	-281.09	1301737.18	3204168.69	40.159355	-104.769511	-203.07		
4323.00	6.45	305.33	4303.42	206.40	-289.21	1301742.79	3204160.53	40.159371	-104.769540	-208.82		
4408.00	6.15	304.64	4387.91	211.75	-296.85	1301748.08	3204152.84	40.159385	-104.769567	-214.23		

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)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	VS (US ft)	Comment	
4493.00	5.84	305.94	4472.44	216.88	-304.10	1301753.14	3204145.55	40.159399	-104.769593	-219.42		
4579.00	6.69	304.45	4557.93	222.28	-311.77	1301758.48	3204137.84	40.159414	-104.769620	-224.89		
4664.00	6.45	304.30	4642.37	227.77	-319.80	1301763.91	3204129.77	40.159429	-104.769649	-230.44		
4750.00	6.08	304.70	4727.86	233.09	-327.53	1301769.16	3204121.99	40.159444	-104.769677	-235.82		
4835.00	6.20	305.26	4812.37	238.30	-334.98	1301774.31	3204114.50	40.159458	-104.769704	-241.10		
4921.00	5.76	303.22	4897.90	243.35	-342.38	1301779.29	3204107.05	40.159472	-104.769730	-246.21		
5006.00	5.93	301.75	4982.46	247.99	-349.69	1301783.88	3204099.71	40.159485	-104.769756	-250.91		
5091.00	6.49	303.63	5066.96	252.96	-357.42	1301788.79	3204091.94	40.159498	-104.769784	-255.95		
5176.00	6.71	306.82	5151.40	258.60	-365.39	1301794.36	3204083.92	40.159514	-104.769812	-261.65		
5262.00	6.30	307.23	5236.84	264.47	-373.17	1301800.16	3204076.09	40.159530	-104.769840	-267.58		
5347.00	6.42	304.67	5321.32	269.99	-380.79	1301805.62	3204068.42	40.159545	-104.769867	-273.17		
5433.00	6.57	311.97	5406.77	276.02	-388.41	1301811.58	3204060.76	40.159562	-104.769895	-279.26		
5604.00	8.69	306.00	5576.25	290.15	-406.13	1301825.57	3204042.92	40.159600	-104.769958	-293.55		
5689.00	8.28	305.06	5660.32	297.44	-416.34	1301832.78	3204032.65	40.159621	-104.769995	-300.92		
5774.00	6.94	306.03	5744.57	303.98	-425.50	1301839.24	3204023.44	40.159638	-104.770027	-307.53		
5860.00	7.16	300.40	5829.92	309.75	-434.33	1301844.94	3204014.56	40.159654	-104.770059	-313.38		
5945.00	7.02	304.41	5914.27	315.36	-443.18	1301850.48	3204005.66	40.159670	-104.770091	-319.07		
6030.00	6.22	305.54	5998.70	320.98	-451.21	1301856.02	3203997.59	40.159685	-104.770119	-324.75		
6116.00	5.23	305.14	6084.27	325.94	-458.21	1301860.93	3203990.55	40.159699	-104.770144	-329.77		
6201.00	4.23	301.82	6168.98	329.82	-464.04	1301864.77	3203984.68	40.159709	-104.770165	-333.70		
6287.00	3.28	300.26	6254.80	332.74	-468.86	1301867.64	3203979.84	40.159717	-104.770183	-336.65		
6372.00	2.67	300.39	6339.68	334.96	-472.67	1301869.83	3203976.01	40.159723	-104.770196	-338.91		
6458.00	2.03	297.98	6425.61	336.69	-475.74	1301871.54	3203972.93	40.159728	-104.770207	-340.66		
6543.00	1.78	295.14	6510.56	337.96	-478.72	1301872.78	3203970.39	40.159732	-104.770216	-341.95		
6629.00	0.49	292.49	6596.54	338.67	-479.82	1301873.48	3203968.84	40.159734	-104.770222	-342.67		
6714.00	0.10	289.22	6681.54	338.83	-480.22	1301873.64	3203968.43	40.159734	-104.770223	-342.84		
6750.00	0.10	139.85	6717.54	338.82	-480.23	1301873.62	3203968.42	40.159734	-104.770223	-342.83		
6793.00	0.38	107.97	6760.54	338.74	-480.07	1301873.55	3203968.58	40.159734	-104.770223	-342.75		
6879.00	8.44	170.34	6846.22	332.42	-478.74	1301867.24	3203969.97	40.159717	-104.770218	-336.42		
6964.00	16.10	181.54	6929.23	314.46	-478.01	1301849.29	3203970.85	40.159667	-104.770215	-318.46		
7049.00	20.80	182.37	7009.84	287.59	-478.95	1301822.41	3203970.13	40.159593	-104.770219	-291.59		
7092.00	24.06	181.57	7049.58	271.19	-479.51	1301806.01	3203969.70	40.159548	-104.770221	-275.20		
7135.00	27.25	184.21	7088.34	252.61	-480.47	1301787.41	3203968.89	40.159497	-104.770224	-256.62		
7177.00	31.87	187.53	7124.86	232.01	-482.63	1301766.80	3203966.90	40.159441	-104.770232	-236.05		
7220.00	36.52	188.95	7160.42	208.11	-486.11	1301742.87	3203963.62	40.159375	-104.770244	-212.17		
7262.00	41.13	186.32	7193.13	182.02	-489.58	1301716.75	3203960.37	40.159304	-104.770257	-186.11		
7305.00	45.74	182.73	7224.36	152.56	-491.87	1301687.28	3203958.32	40.159223	-104.770265	-156.67		
7348.00	52.01	179.51	7252.63	120.20	-492.46	1301654.91	3203958.00	40.159134	-104.770267	-124.32		
7391.00	57.09	179.77	7277.56	85.18	-492.24	1301619.90	3203958.51	40.159038	-104.770266	-89.30		
7433.00	61.71	180.60	7298.93	49.04	-492.36	1301583.76	3203958.68	40.158939	-104.770267	-53.16		
7476.00	68.29	180.67	7317.10	10.09	-492.79	1301544.81	3203958.57	40.158832	-104.770268	-14.22		

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)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	VS (US ft)	Comment	
7518.00	74.77	180.76	7330.39	-29.72	-493.29	1301504.99	3203958.40	40.158722	-104.770270	25.59		
7561.00	79.51	179.81	7339.96	-71.63	-493.50	1301463.08	3203958.54	40.158607	-104.770271	67.49		
7610.00	84.53	177.98	7346.76	-120.13	-492.56	1301414.59	3203959.88	40.158474	-104.770267	116.00		
7663.00	85.79	178.14	7351.23	-172.91	-490.77	1301361.83	3203962.10	40.158329	-104.770261	168.79		
7754.00	87.96	178.41	7356.19	-263.73	-488.03	1301271.04	3203965.59	40.158080	-104.770251	259.63	7 in	
7840.00	87.10	177.82	7359.90	-349.60	-485.21	1301185.19	3203969.12	40.157844	-104.770241	345.52		
7925.00	86.55	176.63	7364.61	-434.37	-481.10	1301100.46	3203973.93	40.157612	-104.770226	430.32		
8011.00	88.89	176.62	7368.03	-520.14	-476.04	1301014.73	3203979.70	40.157376	-104.770208	516.14		
8096.00	87.65	176.58	7370.59	-604.95	-471.00	1300929.96	3203985.43	40.157143	-104.770190	600.99		
8182.00	87.10	177.81	7374.53	-690.76	-466.80	1300844.20	3203990.35	40.156908	-104.770175	686.82		
8267.00	88.34	178.40	7377.91	-775.64	-463.99	1300759.34	3203993.85	40.156675	-104.770165	771.73		
8352.00	88.89	178.79	7379.97	-860.59	-461.90	1300674.41	3203996.64	40.156442	-104.770158	856.69		
8438.00	88.46	178.67	7381.96	-946.55	-460.00	1300588.47	3203999.25	40.156206	-104.770151	942.66		
8523.00	90.06	179.37	7383.05	-1031.52	-458.55	1300503.51	3204001.41	40.155972	-104.770146	1027.65		
8608.00	89.75	179.81	7383.20	-1116.52	-457.94	1300418.52	3204002.72	40.155739	-104.770143	1112.65		
8694.00	89.51	179.00	7383.75	-1202.51	-457.04	1300332.54	3204004.32	40.155503	-104.770140	1198.64		
8779.00	89.20	178.82	7384.71	-1287.49	-455.43	1300247.57	3204006.64	40.155270	-104.770134	1283.63		
8865.00	88.83	179.93	7386.19	-1373.47	-454.49	1300161.60	3204008.28	40.155034	-104.770131	1369.62		
8950.00	89.32	179.86	7387.56	-1458.46	-454.33	1300076.62	3204009.14	40.154800	-104.770130	1454.60		
9035.00	89.32	181.62	7388.57	-1543.45	-455.43	1299991.63	3204008.74	40.154567	-104.770134	1539.58		
9120.00	86.42	181.20	7391.73	-1628.35	-457.52	1299906.71	3204007.35	40.154334	-104.770142	1624.46		
9206.00	87.29	182.62	7396.44	-1714.17	-460.38	1299820.87	3204005.20	40.154098	-104.770152	1710.25		
9291.00	84.94	181.66	7402.20	-1798.91	-463.55	1299736.11	3204002.73	40.153866	-104.770163	1794.96		
9376.00	84.01	181.32	7410.39	-1883.49	-465.75	1299651.52	3204001.23	40.153634	-104.770171	1879.52		
9462.00	85.87	182.00	7417.97	-1969.11	-468.23	1299565.88	3203999.45	40.153399	-104.770180	1965.12		
9547.00	86.11	182.01	7423.92	-2053.85	-471.20	1299481.11	3203997.18	40.153166	-104.770191	2049.83		
9632.00	86.05	180.68	7429.73	-2138.63	-473.19	1299396.32	3203995.89	40.152933	-104.770198	2134.59		
9718.00	85.06	181.04	7436.39	-2224.36	-474.48	1299310.59	3203995.31	40.152698	-104.770202	2220.30		
9803.00	85.99	180.42	7443.02	-2309.09	-475.56	1299225.85	3203994.93	40.152465	-104.770206	2305.02		
9889.00	87.04	180.47	7448.25	-2394.93	-476.22	1299140.01	3203994.97	40.152230	-104.770209	2390.85		
9974.00	87.97	178.59	7451.95	-2479.84	-475.53	1299055.10	3203996.37	40.151996	-104.770206	2475.77		
10059.00	88.58	179.38	7454.51	-2564.79	-474.02	1298970.17	3203998.58	40.151763	-104.770201	2560.72		
10145.00	90.62	180.33	7455.11	-2650.78	-473.80	1298884.19	3203999.50	40.151527	-104.770200	2646.72		
10230.00	90.18	179.75	7454.52	-2735.77	-473.86	1298799.19	3204000.14	40.151294	-104.770200	2731.71		
10316.00	88.89	178.56	7455.22	-2821.76	-472.60	1298713.22	3204002.12	40.151058	-104.770196	2817.70		
10401.00	89.82	178.13	7456.17	-2906.72	-470.14	1298628.28	3204005.28	40.150825	-104.770187	2902.68		
10486.00	90.00	178.24	7456.31	-2991.67	-467.45	1298543.35	3204008.67	40.150591	-104.770177	2987.65		
10572.00	90.18	178.90	7456.17	-3077.65	-465.30	1298457.40	3204011.53	40.150355	-104.770170	3073.64		
10656.00	90.18	179.81	7455.91	-3161.64	-464.36	1298373.42	3204013.16	40.150125	-104.770166	3157.64		
10741.00	91.79	180.14	7454.45	-3246.62	-464.32	1298288.44	3204013.90	40.149892	-104.770166	3242.62		
10826.00	91.36	180.03	7452.11	-3331.59	-464.45	1298203.47	3204014.48	40.149658	-104.770167	3327.58		

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)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	VS (US ft)	Comment		
10912.00	90.55	179.96	7450.68	-3417.58	-464.44	1298117.49	3204015.19	40.149422	-104.770166	3413.57			
10997.00	90.49	179.02	7449.91	-3502.57	-463.68	1298032.50	3204016.65	40.149189	-104.770164	3498.56			
11083.00	89.51	177.77	7449.91	-3588.54	-461.27	1297946.56	3204019.77	40.148953	-104.770155	3584.55			
11168.00	89.38	178.19	7450.73	-3673.48	-458.28	1297861.65	3204023.46	40.148720	-104.770144	3669.51			
11253.00	89.38	177.92	7451.65	-3758.42	-455.39	1297776.73	3204027.05	40.148487	-104.770134	3754.48			
11339.00	89.38	178.36	7452.58	-3844.37	-452.60	1297690.80	3204030.55	40.148251	-104.770124	3840.45			
11424.00	89.14	177.27	7453.68	-3929.30	-449.36	1297605.90	3204034.49	40.148018	-104.770113	3925.40			
11509.00	90.74	177.45	7453.77	-4014.21	-445.45	1297521.03	3204039.11	40.147784	-104.770099	4010.34			
11594.00	91.85	177.89	7451.85	-4099.12	-441.99	1297436.16	3204043.26	40.147551	-104.770086	4095.27			
11679.00	91.35	177.95	7449.47	-4184.03	-438.91	1297351.27	3204047.04	40.147318	-104.770075	4180.20			
11765.00	91.06	177.69	7447.66	-4269.95	-435.64	1297265.39	3204051.02	40.147082	-104.770063	4266.15			
11847.00	87.16	172.82	7448.94	-4351.62	-428.86	1297183.78	3204058.47	40.146858	-104.770039	4347.87			
11899.00	87.16	172.82	7451.51	-4403.14	-422.37	1297132.30	3204065.39	40.146717	-104.770016	4399.45			
Formation Points (Relative to centre, TVD relative to Drill Floor)													
Name													
FOX HILLS													
PARKMAN													
SUSSEX													
SHARON SPRINGS													
NIOBRARA A													
NIOBRARA B CHALK													
NIOBRARA C													
MD (US ft)											MD (US ft)	TVD (US ft)	
0.00											0.00	0.00	
3973.31											3973.31	3956.00	
4382.95											4382.95	4363.00	
7150.49											7150.49	7102.00	
7233.29											7233.29	7171.00	
7372.13											7372.13	7267.00	
7502.46											7502.46	7326.00	