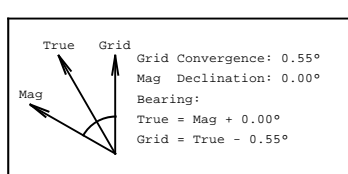


**5D Plan Report****ANADARKO**

Field Name: *WATTENBURG_NAD83*
Site Name: *GREENLEAF PAD*
Well Name: *GREENLEAF 37C-15HZ*
Plan: *PLAN 1*





Plan Point Information:											
DogLeg Severity Unit: °/100.00ft											
Position offsets from Slot centre											
MD	Inc	Az	TVD	+N/-S	+E/-W	VSec	DLS	Toolface	Build	Turn	
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(DLSU)	(°)	(DLSU)	(DLSU)	(DLSU)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0R	0.00	0.00	
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	0.0R	0.00	0.00	
4592.01	27.84	76.88	4537.87	75.27	322.93	-73.97	2.00	76.9R	2.00	0.00	
5379.45	27.84	76.88	5234.17	158.74	681.07	-156.00	0.00	0.0R	0.00	0.00	
6771.45	0.00	0.00	6572.04	234.00	1004.01	-229.97	2.00	180.0R	-2.00	0.00	
7670.09	89.86	179.77	7145.00	-337.59	1006.34	341.63	10.00	179.8R	10.00	0.00	
11888.79	89.86	179.77	7155.00	-4556.25	1023.54	4560.32	0.00	0.0R	0.00	0.00	

Plan Data for GREENLEAF 37C-15HZ

Field: WATTENBURG_NAD83

Map Unit: USFt Vertical Reference Datum (VRD):
Projected Coordinate System: NAD83 / Colorado North (ftUS)

Site: GREENLEAF PAD

Unit: USFeet TVD Reference:

Company Name: ANADARKO

Position: Northing: 1296828.47USft Latitude: 40.145053°

Easting: 3237966.22USft Longitude: -104.648763°

North Reference: Grid Grid Convergence: 0.55°

Elevation Above VRD: 4868.00USft

Slot: GREENLEAF 37C-15HZ

Position:

Offset is from Site centre

+N/-S: 45.91USft Northing: 1296874.38USft Latitude: 40.145178°

+E/-W: 38.98USft Easting: 3238005.20USft Longitude: -104.648622°

Elevation Above VRD: 4868.00USft

Well: GREENLEAF 37C-15HZ

Type: Main-Well

File Number:

Vertical Section: Position offset of origin from Slot centre:

+N/-S: -45.91USft Azimuth: 179.77°

+E/-W: -38.98USft

Magnetic Parameters:

Model: Field Strength: Declination: Dip: Date:

Default 50000(nT) 0.00° 0.00° 2013-07-08

Casing Point Information:

Name	MD	TVD
	(USft)	(USft)
9 5/8 in	750.00	750.00
7 in	7670.09	7145.00

LINER: 6671.45' MD

KOP: 6771.45' MD

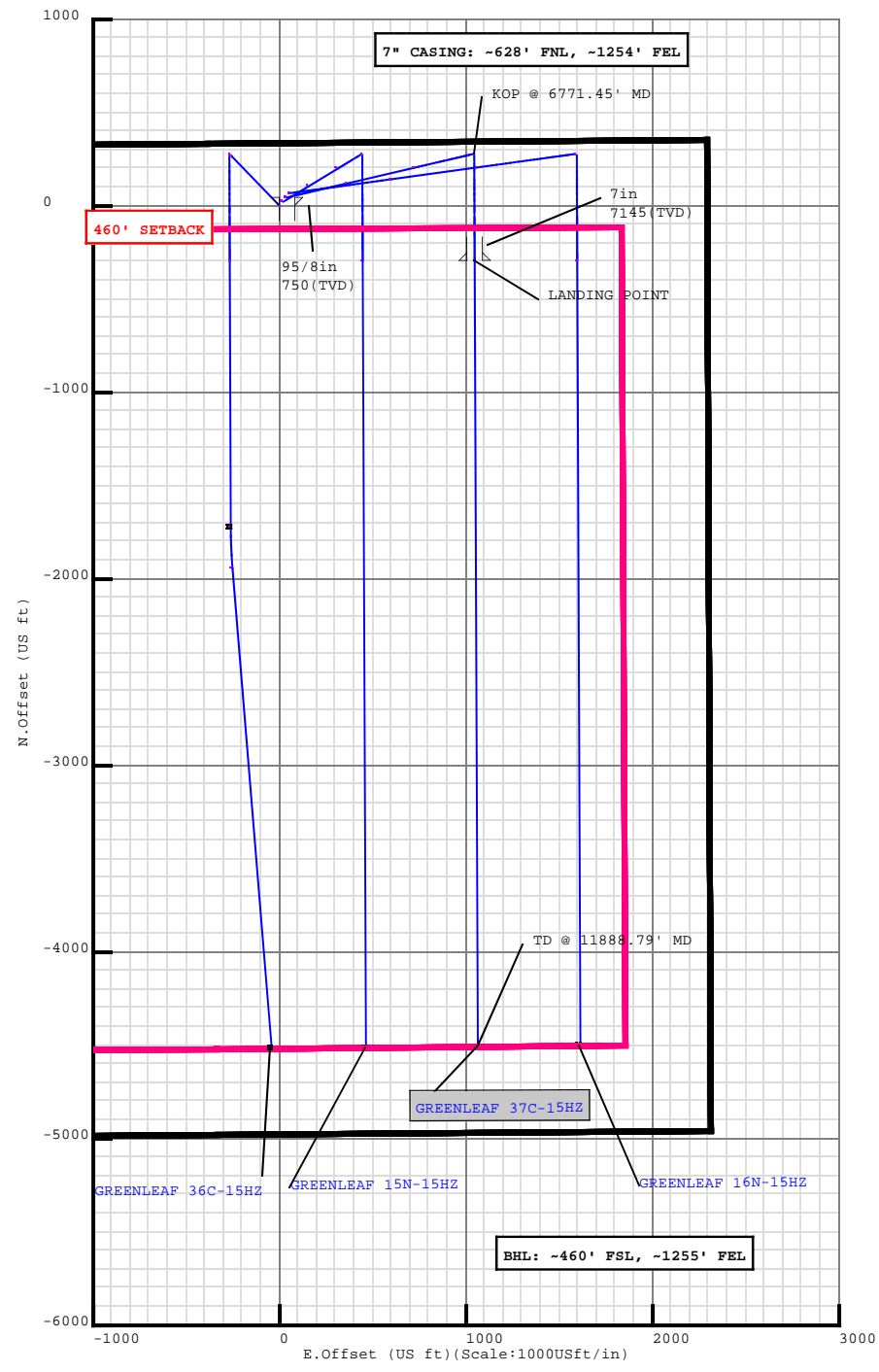
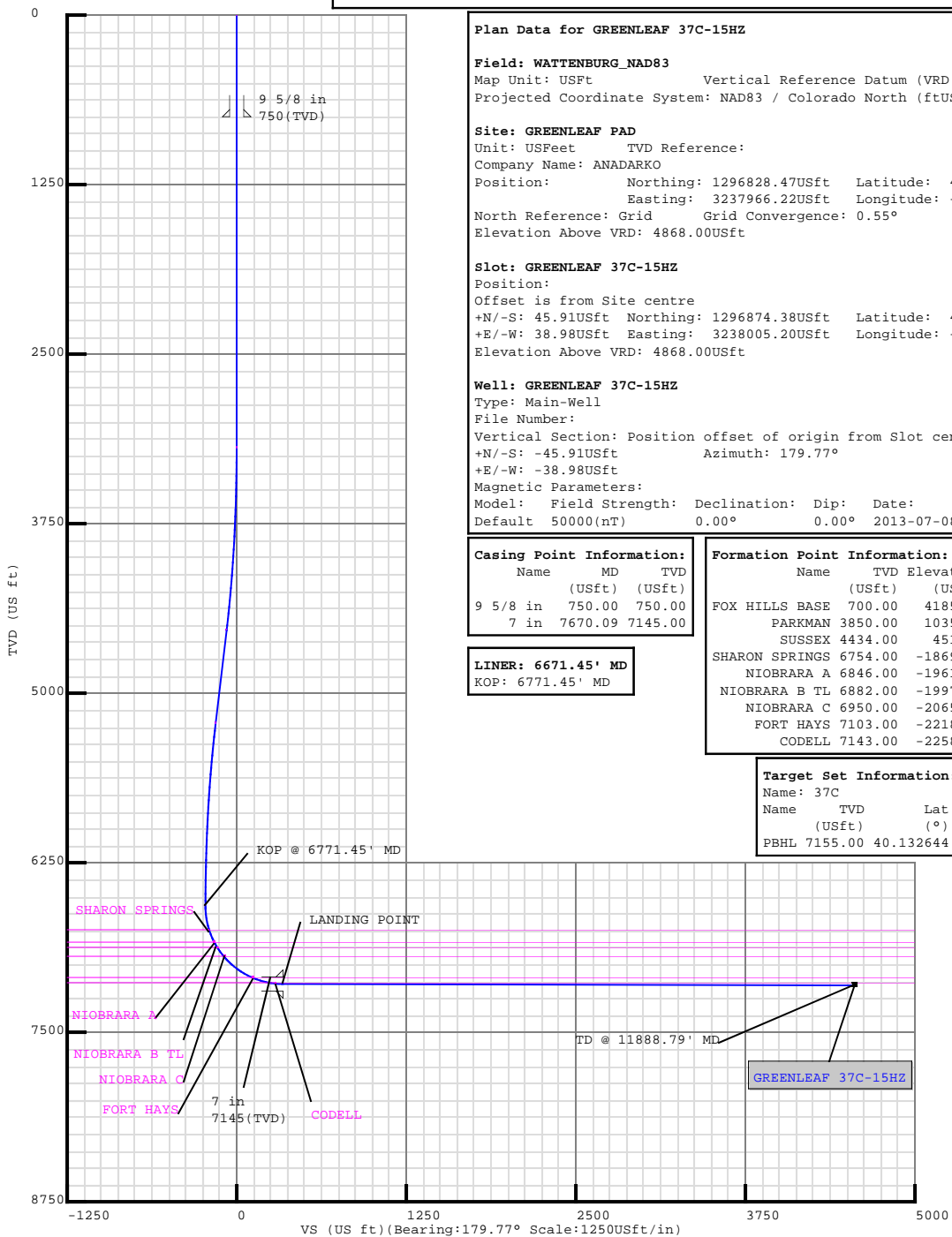
Formation Point Information:

Name	TVD	Elevation	MD
	(USft)	(USft)	(USft)
FOX HILLS BASE	700.00	4185.00	700.00
PARKMAN	3850.00	1035.00	3855.71
SUSSEX	4434.00	451.00	4475.75
SHARON SPRINGS	6754.00	-1869.00	6956.61
NIOBRARA A	6846.00	-1961.00	7057.09
NIOBRARA B TL	6882.00	-1997.00	7098.95
NIOBRARA C	6950.00	-2065.00	7184.19
FORT HAYS	7103.00	-2218.00	7450.70
CODELL	7143.00	-2258.00	7623.54

Target Set Information:

Name: 37C

Name	TVD	Lat	Long
	(USft)	(°)	(°)
PBHL	7155.00	40.132644	-104.645118



Plan Surveys for the GREENLEAF 37C-15HZ

Site Name GREENLEAF PAD	Units : US ft	North Reference : Grid	Convergence Angle : 0.55
	Position	Northing : 1296828.47 US ft	Latitude : 40.145053
		Easting : 3237966.22 US ft	Longitude : -104.648763
	Elevation above: 4868.00 US ft Comment :		
Slot Name GREENLEAF 37C-15HZ	Position (Offsets relative to Site Centre)		
	+N / -S : 45.91 US ft	Northing : 1296874.38 US ft	Latitude : 40.145178
	+E / -W : 38.98 US ft	Easting : 3238005.20 US ft	Longitude : -104.648622
	Slot TVD Reference : Ground Elevation Elevation above : 4868.00 US ft Comment :		
Well Name GREENLEAF 37C-15HZ	Type : Main well	UWI :	Plan : PLAN 1
	Rig Height <i>Drill Floor</i> : 17.00 US ft	Comment :	
	Relative to : 4885.00 US ft		
	Closure Distance : 4669.8 US ft	Closure Azimuth : 167.339°	
	Vertical Section (Position of Origin Relative to Slot)		
	+N / -S : -45.91 US ft	+E / -W : -38.98 US ft	Az : 179.77°
	Magnetic Parameters		
	Model : Default	Field Strength : 50000.0nT	Dec : 0.00°
		Dip : 0.00°	Date : 08/Jul/2013

Target Set

Name : 37C

Number of Targets : 1

Comment :

TargetName:	Position (Relative to centre)			
PBHL	+N / -S : -4556.25US ft	Northing : 1292318.13 US ft	Latitude : 40°7'57.518400"	
Shape:	+E / -W : 1023.54 US ft	Easting : 3239028.74US ft	Longitude : -104°38'42.424800"	
Cuboid	TVD (Drill Floor) : 7155.00 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

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)	Latitude (°)	Longitude (°)
9 5/8 in	750.00	0.00	0.00	750.00	0.00	0.00	40.145178	-104.648622
7 in	7670.09	89.86	179.77	7145.00	-337.59	1006.34	40.144225	-104.645034

Well path created using minimum curvature

Salient 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)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-45.75	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	-45.75	FOX HILLS BASE :
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	-45.75	9 5/8 in
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	-45.75	
3855.71	13.11	76.88	3850.00	16.96	72.76	2.00	76.88	-62.42	PARKMAN :
4475.75	25.51	76.88	4434.00	63.42	272.10	2.00	0.00	-108.08	SUSSEX :
4592.01	27.84	76.88	4537.87	75.27	322.93	2.00	0.00	-119.72	
5379.45	27.84	76.88	5234.17	158.74	681.07	0.00	0.00	-201.75	
6771.45	0.00	0.00	6572.04	234.00	1004.01	2.00	180.00	-275.72	KOP @ 6771.45' MD
6956.61	18.52	179.77	6754.00	204.34	1004.13	10.00	179.77	-246.06	SHARON SPRINGS :
7057.09	28.56	179.77	6846.00	164.26	1004.29	10.00	0.00	-205.98	NIOBRARA A :
7098.95	32.75	179.77	6882.00	142.92	1004.38	10.00	0.00	-184.64	NIOBRARA B TL :
7184.19	41.27	179.77	6950.00	91.66	1004.59	10.00	0.00	-133.38	NIOBRARA C :
7450.70	67.93	179.77	7103.00	-123.62	1005.47	10.00	0.00	81.91	FORT HAYS :
7623.54	85.21	179.77	7143.00	-291.10	1006.15	10.00	0.00	249.38	CODELL :
7670.09	89.86	179.77	7145.00	-337.59	1006.34	10.00	0.00	295.87	7 in

5D Plan Report

Salient 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)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
7670.09	89.86	179.77	7145.00	-337.59	1006.34	0.00	0.00	295.88	LANDING POINT
11888.79	89.86	179.77	7155.00	-4556.25	1023.54	0.00	0.00	4514.56	TD @ 11888.79' MD
Interpolated 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)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-45.75	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	-45.75	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	-45.75	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	-45.75	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	-45.75	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	-45.75	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	-45.75	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	-45.75	FOX HILLS BASE : 9 5/8 in
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	-45.75	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	-45.75	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	-45.75	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	-45.75	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	-45.75	
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	-45.75	
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	-45.75	
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	-45.75	
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	-45.75	
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	-45.75	
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	-45.75	
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	-45.75	
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	-45.75	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	-45.75	
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	-45.75	
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	-45.75	
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	-45.75	
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	-45.75	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	-45.75	
2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	-45.75	
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	-45.75	
2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	-45.75	
2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	-45.75	
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	-45.75	
3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	-45.75	
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	-45.75	
3300.00	2.00	76.88	3299.98	0.40	1.70	2.00	76.88	-46.14	
3400.00	4.00	76.88	3399.84	1.58	6.80	2.00	0.00	-47.31	

5D Plan Report

Interpolated 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)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
3500.00	6.00	76.88	3499.45	3.56	15.28	2.00	0.00	-49.25	
3600.00	8.00	76.88	3598.70	6.33	27.15	2.00	0.00	-51.97	
3700.00	10.00	76.88	3697.47	9.88	42.39	2.00	0.00	-55.46	
3800.00	12.00	76.88	3795.62	14.21	60.97	2.00	0.00	-59.72	
3855.71	13.11	76.88	3850.00	16.96	72.76	2.00	0.00	-62.42	PARKMAN :
3900.00	14.00	76.88	3893.06	19.32	82.88	2.00	0.00	-64.74	
4000.00	16.00	76.88	3989.64	25.19	108.08	2.00	0.00	-70.51	
4100.00	18.00	76.88	4085.27	31.83	136.55	2.00	0.00	-77.03	
4200.00	20.00	76.88	4179.82	39.22	168.26	2.00	0.00	-84.29	
4300.00	22.00	76.88	4273.17	47.35	203.16	2.00	0.00	-92.29	
4400.00	24.00	76.88	4365.21	56.22	241.21	2.00	0.00	-101.00	
4475.75	25.51	76.88	4434.00	63.42	272.10	2.00	0.00	-108.08	SUSSEX :
4500.00	26.00	76.88	4455.84	65.81	282.37	2.00	0.00	-110.43	
4592.01	27.84	76.88	4537.87	75.27	322.93	2.00	0.00	-119.72	
4600.00	27.84	76.88	4544.94	76.11	326.57	0.00	0.00	-120.55	
4700.00	27.84	76.88	4633.37	86.71	372.05	0.00	0.00	-130.97	
4800.00	27.84	76.88	4721.79	97.31	417.53	0.00	0.00	-141.39	
4900.00	27.84	76.88	4810.22	107.91	463.01	0.00	0.00	-151.81	
5000.00	27.84	76.88	4898.64	118.51	508.49	0.00	0.00	-162.22	
5100.00	27.84	76.88	4987.07	129.11	553.98	0.00	0.00	-172.64	
5200.00	27.84	76.88	5075.49	139.71	599.46	0.00	0.00	-183.06	
5300.00	27.84	76.88	5163.92	150.31	644.94	0.00	0.00	-193.48	
5379.45	27.84	76.88	5234.17	158.74	681.07	0.00	0.00	-201.75	
5400.00	27.43	76.88	5252.38	160.90	690.36	2.00	180.00	-203.88	
5500.00	25.43	76.88	5341.92	171.00	733.70	2.00	180.00	-213.81	
5600.00	23.43	76.88	5432.97	180.39	773.98	2.00	180.00	-223.03	
5700.00	21.43	76.88	5525.40	189.05	811.13	2.00	180.00	-231.55	
5800.00	19.43	76.88	5619.10	196.97	845.13	2.00	180.00	-239.33	
5900.00	17.43	76.88	5713.97	204.15	875.91	2.00	180.00	-246.38	
6000.00	15.43	76.88	5809.88	210.57	903.46	2.00	180.00	-252.69	
6100.00	13.43	76.88	5906.72	216.22	927.72	2.00	180.00	-258.25	
6200.00	11.43	76.88	6004.37	221.11	948.68	2.00	180.00	-263.05	
6300.00	9.43	76.88	6102.72	225.22	966.31	2.00	180.00	-267.09	
6400.00	7.43	76.88	6201.63	228.54	980.59	2.00	180.00	-270.36	
6500.00	5.43	76.88	6301.00	231.08	991.49	2.00	180.00	-272.86	
6600.00	3.43	76.88	6400.69	232.84	999.01	2.00	180.00	-274.58	
6700.00	1.43	76.88	6500.60	233.80	1003.14	2.00	180.00	-275.52	
6771.45	0.00	0.00	6572.04	234.00	1004.01	2.00	180.00	-275.72	KOP @ 6771.45' MD
6800.00	2.85	179.77	6600.58	233.29	1004.01	10.00	179.77	-275.01	
6900.00	12.85	179.77	6699.52	219.64	1004.07	10.00	0.00	-261.36	
6956.61	18.52	179.77	6754.00	204.34	1004.13	10.00	0.00	-246.06	SHARON SPRINGS :

5D Plan Report

Interpolated 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)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
7000.00	22.85	179.77	6794.58	189.02	1004.19	10.00	0.00	-230.74	
7057.09	28.56	179.77	6846.00	164.26	1004.29	10.00	0.00	-205.98	NIOBRARA A :
7098.95	32.75	179.77	6882.00	142.92	1004.38	10.00	0.00	-184.64	NIOBRARA B TL :
7100.00	32.85	179.77	6882.88	142.36	1004.38	10.00	0.00	-184.08	
7184.19	41.27	179.77	6950.00	91.66	1004.59	10.00	0.00	-133.38	NIOBRARA C :
7200.00	42.85	179.77	6961.74	81.07	1004.63	10.00	0.00	-122.79	
7300.00	52.85	179.77	7028.75	7.02	1004.93	10.00	0.00	-48.74	
7400.00	62.85	179.77	7081.89	-77.54	1005.28	10.00	0.00	35.82	
7450.70	67.93	179.77	7103.00	-123.62	1005.47	10.00	0.00	81.91	FORT HAYS :
7500.00	72.85	179.77	7119.54	-170.05	1005.65	10.00	0.00	128.33	
7600.00	82.85	179.77	7140.55	-267.68	1006.05	10.00	0.00	225.97	
7623.54	85.21	179.77	7143.00	-291.10	1006.15	10.00	0.00	249.38	CODELL :
7670.09	89.86	179.77	7145.00	-337.59	1006.34	10.00	0.00	295.87	7 in
7670.09	89.86	179.77	7145.00	-337.59	1006.34	0.00	0.00	295.88	LANDING POINT
7700.00	89.86	179.77	7145.07	-367.50	1006.46	0.00	0.00	325.78	
7800.00	89.86	179.77	7145.31	-467.50	1006.87	0.00	0.00	425.78	
7900.00	89.86	179.77	7145.55	-567.50	1007.28	0.00	0.00	525.78	
8000.00	89.86	179.77	7145.78	-667.50	1007.68	0.00	0.00	625.78	
8100.00	89.86	179.77	7146.02	-767.49	1008.09	0.00	0.00	725.78	
8200.00	89.86	179.77	7146.26	-867.49	1008.50	0.00	0.00	825.78	
8300.00	89.86	179.77	7146.49	-967.49	1008.91	0.00	0.00	925.78	
8400.00	89.86	179.77	7146.73	-1067.49	1009.31	0.00	0.00	1025.78	
8500.00	89.86	179.77	7146.97	-1167.49	1009.72	0.00	0.00	1125.78	
8600.00	89.86	179.77	7147.21	-1267.49	1010.13	0.00	0.00	1225.78	
8700.00	89.86	179.77	7147.44	-1367.49	1010.54	0.00	0.00	1325.78	
8800.00	89.86	179.77	7147.68	-1467.49	1010.95	0.00	0.00	1425.78	
8900.00	89.86	179.77	7147.92	-1567.49	1011.35	0.00	0.00	1525.78	
9000.00	89.86	179.77	7148.15	-1667.48	1011.76	0.00	0.00	1625.78	
9100.00	89.86	179.77	7148.39	-1767.48	1012.17	0.00	0.00	1725.78	
9200.00	89.86	179.77	7148.63	-1867.48	1012.58	0.00	0.00	1825.78	
9300.00	89.86	179.77	7148.87	-1967.48	1012.98	0.00	0.00	1925.78	
9400.00	89.86	179.77	7149.10	-2067.48	1013.39	0.00	0.00	2025.78	
9500.00	89.86	179.77	7149.34	-2167.48	1013.80	0.00	0.00	2125.78	
9600.00	89.86	179.77	7149.58	-2267.48	1014.21	0.00	0.00	2225.78	
9700.00	89.86	179.77	7149.81	-2367.48	1014.62	0.00	0.00	2325.78	
9800.00	89.86	179.77	7150.05	-2467.48	1015.02	0.00	0.00	2425.78	
9900.00	89.86	179.77	7150.29	-2567.47	1015.43	0.00	0.00	2525.78	
10000.00	89.86	179.77	7150.53	-2667.47	1015.84	0.00	0.00	2625.78	
10100.00	89.86	179.77	7150.76	-2767.47	1016.25	0.00	0.00	2725.78	
10200.00	89.86	179.77	7151.00	-2867.47	1016.65	0.00	0.00	2825.78	
10300.00	89.86	179.77	7151.24	-2967.47	1017.06	0.00	0.00	2925.78	

5D Plan Report

Interpolated 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)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
10400.00	89.86	179.77	7151.47	-3067.47	1017.47	0.00	0.00	3025.77	
10500.00	89.86	179.77	7151.71	-3167.47	1017.88	0.00	0.00	3125.77	
10600.00	89.86	179.77	7151.95	-3267.47	1018.29	0.00	0.00	3225.77	
10700.00	89.86	179.77	7152.19	-3367.47	1018.69	0.00	0.00	3325.77	
10800.00	89.86	179.77	7152.42	-3467.46	1019.10	0.00	0.00	3425.77	
10900.00	89.86	179.77	7152.66	-3567.46	1019.51	0.00	0.00	3525.77	
11000.00	89.86	179.77	7152.90	-3667.46	1019.92	0.00	0.00	3625.77	
11100.00	89.86	179.77	7153.13	-3767.46	1020.32	0.00	0.00	3725.77	
11200.00	89.86	179.77	7153.37	-3867.46	1020.73	0.00	0.00	3825.77	
11300.00	89.86	179.77	7153.61	-3967.46	1021.14	0.00	0.00	3925.77	
11400.00	89.86	179.77	7153.84	-4067.46	1021.55	0.00	0.00	4025.77	
11500.00	89.86	179.77	7154.08	-4167.46	1021.96	0.00	0.00	4125.77	
11600.00	89.86	179.77	7154.32	-4267.46	1022.36	0.00	0.00	4225.77	
11700.00	89.86	179.77	7154.56	-4367.45	1022.77	0.00	0.00	4325.77	
11800.00	89.86	179.77	7154.79	-4467.45	1023.18	0.00	0.00	4425.77	
11888.79	89.86	179.77	7155.00	-4556.25	1023.54	0.00	0.00	4514.56	TD @ 11888.79' MD

Formation Points (Relative to centre, TVD relative to Drill Floor)		
Name	MD (US ft)	TVD (US ft)
FOX HILLS BASE	700.00	700.00
PARKMAN	3855.71	3850.00
SUSSEX	4475.75	4434.00
SHARON SPRINGS	6956.61	6754.00
NIOBRARA A	7057.09	6846.00
NIOBRARA B TL	7098.95	6882.00
NIOBRARA C	7184.19	6950.00
FORT HAYS	7450.70	7103.00
CODELL	7623.54	7143.00