

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

**Field Name:** *WATTENBURG\_NAD83*  
**Site Name:** *GEE 15C-25HZ PAD*  
**Well Name:** *GEE 2C-12HZ*  
**Plan:** *PLAN 1*





## Plan Data for GEE 2C-12HZ

### Field: WATTENBURG\_NAD83

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

### Site: GEE 15C-25HZ PAD

Unit: USFet TVD Reference:  
Company Name: ANADARKO  
Position: Northing: 1290361.43USft Latitude: 40.128524°  
Easting: 3185826.54USft Longitude: -104.835439°  
North Reference: True Grid Convergence: 0.43°  
Elevation Above VRD: 4859.00USft

### Slot: GEE 2C-12HZ

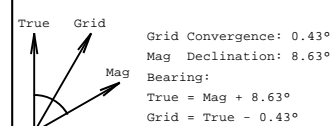
Position:  
Offset is from Site centre  
+N/-S: 29.14USft Northing: 1290390.63USft Latitude: 40.128604°  
+E/-W: 7.83USft Easting: 3185834.16USft Longitude: -104.835411°  
Elevation Above VRD: 4859.00USft

### Well: GEE 2C-12HZ

Type: Main-Well  
File Number:  
Vertical Section: Position offset of origin from Slot centre:  
+N/-S: -29.14USft Azimuth: 360.33°  
+E/-W: -7.83USft  
Magnetic Parameters:  
Model: Field Strength: Declination: Dip: Date:  
BGGM 52735(nT) 8.63° 66.74° 2013-07-08

### 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)	(USft)	(DLSU)	(°)	(DLSU)	(DLSU)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	
4150.00	0.00	0.00	4150.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	
4980.62	16.61	303.05	4969.03	65.22	-100.22	64.64	2.00	303.1	2.00	0.00	
6067.98	16.61	303.05	6011.01	234.78	-360.78	232.70	0.00	0.0	0.00	0.00	
6898.60	0.00	0.00	6830.04	300.00	-461.00	297.34	2.00	180.0	-2.00	0.00	
7799.30	90.07	0.00	7403.00	873.66	-461.00	870.99	10.00	0.0	10.00	0.00	
12999.30	90.07	0.00	7396.64	6073.66	-461.00	6070.90	0.00	0.0	0.00	0.00	
13299.30	90.07	352.00	7396.28	6372.68	-481.91	6369.80	2.67	270.0	0.00	-2.67	
13899.30	90.07	8.00	7395.54	6970.73	-481.91	6967.84	2.67	90.0	0.00	2.67	
14254.14	90.07	0.90	7395.11	7324.27	-454.39	7321.53	2.00	270.0	-0.00	-2.00	
17723.19	90.07	0.90	7391.00	10792.89	-399.70	10790.41	0.00	0.0	0.00	0.00	



### Formation Point Information:

Name	TVD	Elevation	MD
(USft)	(USft)	(USft)	
SHARON SPRINGS	7061.00	-2185.00	7136.33
NIOBRARA A	7129.00	-2253.00	7213.12
NIOBRARA B	7163.00	-2287.00	7253.90
NIOBRARA C	7248.00	-2372.00	7367.03
FORT HAYS	7376.00	-2500.00	7622.02
CODELL	7398.00	-2522.00	7722.87

### LINER - 6798.60' MD

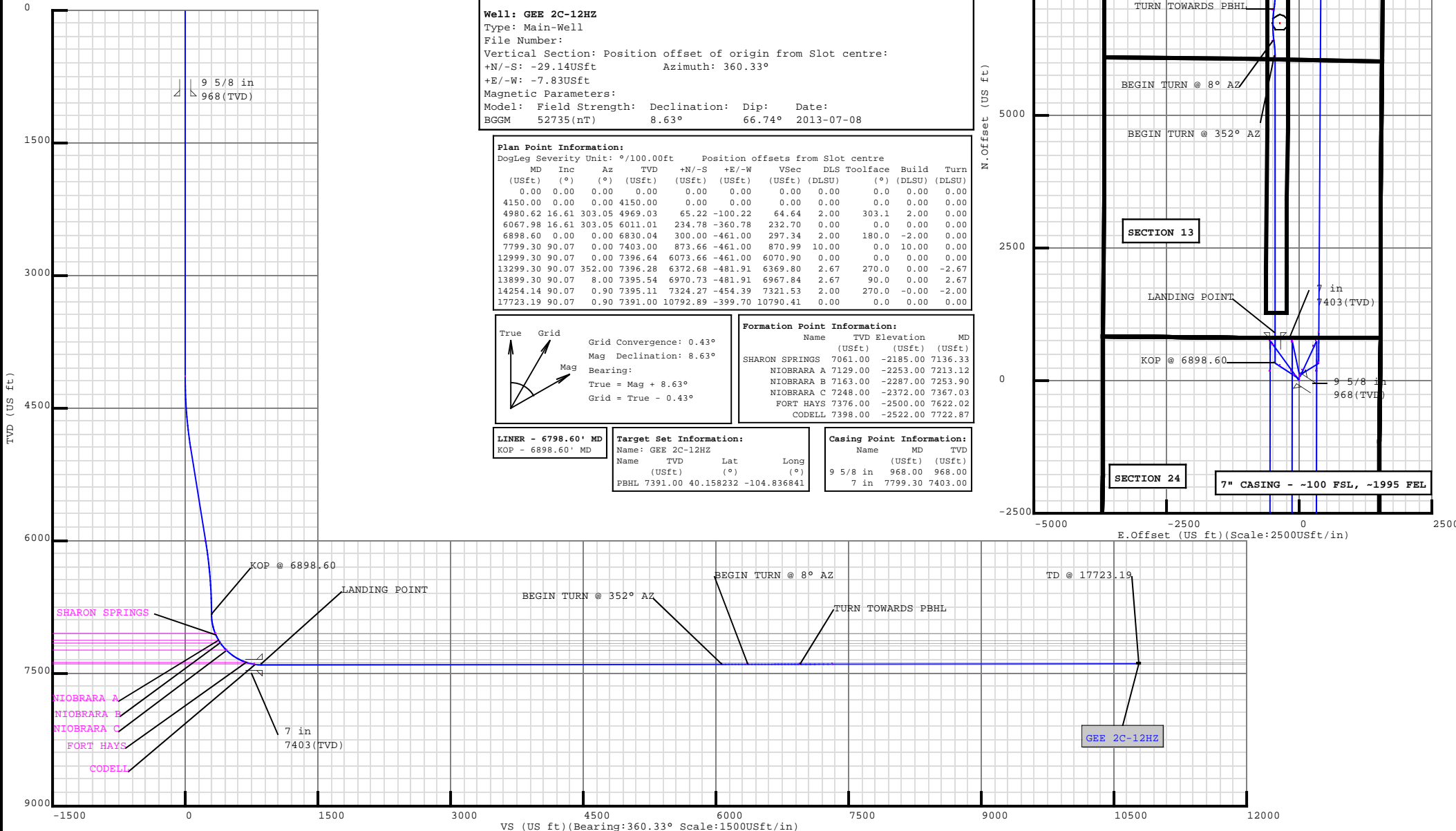
KOP - 6898.60' MD

### Target Set Information:

Name	TVD	Lat	Long
(USft)	(°)	(°)	
PBHL	7391.00	40.158232	-104.836841

### Casing Point Information:

Name	MD	TVD
(USft)	(USft)	(USft)
9 5/8 in	968.00	968.00
7 in	7799.30	7403.00



## Plan Surveys for the GEE 2C-12HZ

<b>Site Name</b> GEE 15C-25HZ PAD	<b>Units :</b> US ft	<b>North Reference :</b> True	<b>Convergence Angle :</b> 0.43
	<b>Position</b>	<b>Northing :</b> 1290361.43 US ft	<b>Latitude :</b> 40.128524
		<b>Easting :</b> 3185826.54 US ft	<b>Longitude :</b> -104.835439
	<b>Elevation above:</b> 4859.00 US ft <b>Comment :</b>		
<b>Slot Name</b> GEE 2C-12HZ	<b>Position (Offsets relative to Site Centre)</b>		
	<b>+N / -S :</b> 29.14 US ft	<b>Northing :</b> 1290390.63 US ft	<b>Latitude :</b> 40.128604
	<b>+E / -W :</b> 7.83 US ft	<b>Easting :</b> 3185834.16 US ft	<b>Longitude :</b> -104.835411
	<b>Slot TVD Reference :</b> Ground Elevation <b>Elevation above :</b> 4859.00 US ft <b>Comment :</b>		
<b>Well Name</b> GEE 2C-12HZ	<b>Type :</b> Main well	<b>UWI :</b>	<b>Plan :</b> PLAN 1
	<b>Rig Height <i>Drill Floor</i> :</b> 17.00 US ft	<b>Comment :</b>	
	<b>Relative to :</b> 4876.00 US ft		
	<b>Closure Distance :</b> 10800.3 US ft	<b>Closure Azimuth :</b> 357.879°	
	<b>Vertical Section (Position of Origin Relative to Slot )</b>		
	<b>+N / -S :</b> -29.14 US ft	<b>+E / -W :</b> -7.83 US ft	<b>Az :</b> 0.33°
	<b>Magnetic Parameters</b>		
	<b>Model :</b> BGGM	<b>Field Strength :</b> 52735.3nT	<b>Dec :</b> 8.63°
			<b>Dip :</b> 66.74°
			<b>Date :</b> 08/Jul/2013

**Target Set****Name :** GEE 2C-12HZ**Number of Targets :** 1**Comment :**

TargetName:	Position (Relative to centre)			
PBHL	+N / -S : 10792.89US ft		Northing : 1301180.22 US ft	Latitude : 40°9'29.635200"
Shape:	+E / -W : -399.70 US ft		Easting : 3185353.59US ft	Longitude : -104°50'12.627600"
Cuboid	TVD (Drill Floor) : 7391.00 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	968.00	0.00	0.00	968.00	0.00	0.00	40.128604	-104.835411
7 in	7799.30	90.07	0.00	7403.00	873.66	-461.00	40.131002	-104.837060

**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)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	40.128604	-104.835411	0.00	0.00	29.19	
968.00	0.00	0.00	968.00	0.00	0.00	40.128604	-104.835411	0.00	0.00	29.19	9 5/8 in
4150.00	0.00	0.00	4150.00	0.00	0.00	40.128604	-104.835411	0.00	0.00	29.19	
4980.62	16.61	303.05	4969.03	65.22	-100.22	40.128783	-104.835769	2.00	303.05	93.83	
6067.98	16.61	303.05	6011.01	234.78	-360.78	40.129249	-104.836701	0.00	0.00	261.89	
6898.60	0.00	0.00	6830.04	300.00	-461.00	40.129428	-104.837060	2.00	180.00	326.53	
7136.33	23.77	0.00	7061.00	348.61	-461.00	40.129561	-104.837060	10.00	0.00	375.14	SHARON SPRINGS :
7213.12	31.45	0.00	7129.00	384.18	-461.00	40.129659	-104.837060	10.00	0.00	410.71	NIOBRARA A :
7253.90	35.53	0.00	7163.00	406.68	-461.00	40.129720	-104.837060	10.00	0.00	433.21	NIOBRARA B :
7367.03	46.84	0.00	7248.00	481.05	-461.00	40.129925	-104.837060	10.00	0.00	507.58	NIOBRARA C :
7622.02	72.34	0.00	7376.00	699.15	-461.00	40.130523	-104.837060	10.00	0.00	725.68	FORT HAYS :
7722.87	82.43	0.00	7398.00	797.45	-461.00	40.130793	-104.837060	10.00	0.00	823.97	CODELL :
7799.30	90.07	0.00	7403.00	873.66	-461.00	40.131002	-104.837060	10.00	0.00	900.18	7 in
7799.30	90.07	0.00	7403.00	873.66	-461.00	40.131002	-104.837060	0.00	0.00	900.18	
12999.30	90.07	0.00	7396.64	6073.66	-461.00	40.145277	-104.837060	0.00	0.00	6100.09	

## 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)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
13299.30	90.07	352.00	7396.28	6372.68	-481.91	40.146098	-104.837135	2.67	270.00	6398.99	
13899.30	90.07	8.00	7395.54	6970.73	-481.91	40.147740	-104.837135	2.67	89.99	6997.03	
14254.14	90.07	0.90	7395.11	7324.27	-454.39	40.148710	-104.837036	2.00	269.99	7350.72	
17723.19	90.07	0.90	7391.00	10792.89	-399.70	40.158232	-104.836841	0.00	0.00	10819.60	

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	29.19			
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	29.19			
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	29.19			
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	29.19			
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	29.19			
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	29.19			
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	29.19			
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	29.19			
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	29.19			
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	29.19			
968.00	0.00	0.00	968.00	0.00	0.00	0.00	0.00	29.19	9 5/8 in		
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	29.19			
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	29.19			
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	29.19			
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	29.19			
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	29.19			
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	29.19			
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	29.19			
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	29.19			
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	29.19			
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	29.19			
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	29.19			
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	29.19			
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	29.19			
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	29.19			
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	29.19			
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	29.19			
2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	29.19			
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	29.19			
2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	29.19			
2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	29.19			
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	29.19			
3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	29.19			
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	29.19			

## 5D Plan Report

Interpolated Points (Relative to centre, TVD relative to Drill Floor )										Comment
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)		
3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	29.19		
3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	29.19		
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	29.19		
3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	29.19		
3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	29.19		
3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	29.19		
3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	29.19		
4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	29.19		
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	29.19		
4150.00	0.00	0.00	4150.00	0.00	0.00	0.00	0.00	29.19		
4200.00	1.00	303.05	4200.00	0.24	-0.37	2.00	303.05	29.43		
4300.00	3.00	303.05	4299.93	2.14	-3.29	2.00	0.00	31.31		
4400.00	5.00	303.05	4399.68	5.95	-9.14	2.00	0.00	35.08		
4500.00	7.00	303.05	4499.13	11.65	-17.90	2.00	0.00	40.73		
4600.00	9.00	303.05	4598.15	19.24	-29.56	2.00	0.00	48.26		
4700.00	11.00	303.05	4696.63	28.71	-44.12	2.00	0.00	57.64		
4800.00	13.00	303.05	4794.44	40.05	-61.54	2.00	0.00	68.88		
4900.00	15.00	303.05	4891.46	53.24	-81.82	2.00	0.00	81.96		
4980.62	16.61	303.05	4969.03	65.22	-100.22	2.00	0.00	93.83		
5000.00	16.61	303.05	4987.60	68.24	-104.87	0.00	0.00	96.83		
5100.00	16.61	303.05	5083.43	83.84	-128.83	0.00	0.00	112.28		
5200.00	16.61	303.05	5179.25	99.43	-152.79	0.00	0.00	127.74		
5300.00	16.61	303.05	5275.08	115.02	-176.75	0.00	0.00	143.19		
5400.00	16.61	303.05	5370.91	130.62	-200.72	0.00	0.00	158.65		
5500.00	16.61	303.05	5466.73	146.21	-224.68	0.00	0.00	174.10		
5600.00	16.61	303.05	5562.56	161.81	-248.64	0.00	0.00	189.56		
5700.00	16.61	303.05	5658.38	177.40	-272.60	0.00	0.00	205.02		
5800.00	16.61	303.05	5754.21	192.99	-296.57	0.00	0.00	220.47		
5900.00	16.61	303.05	5850.04	208.59	-320.53	0.00	0.00	235.93		
6000.00	16.61	303.05	5945.86	224.18	-344.49	0.00	0.00	251.38		
6067.98	16.61	303.05	6011.01	234.78	-360.78	0.00	0.00	261.89		
6100.00	15.97	303.05	6041.74	239.68	-368.31	2.00	180.00	266.74		
6200.00	13.97	303.05	6138.34	253.77	-389.96	2.00	180.00	280.71		
6300.00	11.97	303.05	6235.78	266.01	-408.78	2.00	180.00	292.85		
6400.00	9.97	303.05	6333.95	276.40	-424.73	2.00	180.00	303.13		
6500.00	7.97	303.05	6432.72	284.90	-437.80	2.00	180.00	311.56		
6600.00	5.97	303.05	6531.98	291.52	-447.97	2.00	180.00	318.13		
6700.00	3.97	303.05	6631.59	296.25	-455.24	2.00	180.00	322.81		
6800.00	1.97	303.05	6731.46	299.08	-459.58	2.00	180.00	325.61		
6898.60	0.00	0.00	6830.04	300.00	-461.00	2.00	180.00	326.53		
6900.00	0.14	0.00	6831.44	300.00	-461.00	10.00	0.00	326.53		

## 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	10.14	0.00	6930.91	308.95	-461.00	10.00	0.00	335.48	
7100.00	20.14	0.00	7027.31	335.03	-461.00	10.00	0.00	361.56	
7136.33	23.77	0.00	7061.00	348.61	-461.00	10.00	0.00	375.14	SHARON SPRINGS :
7200.00	30.14	0.00	7117.73	377.46	-461.00	10.00	0.00	403.99	
7213.12	31.45	0.00	7129.00	384.18	-461.00	10.00	0.00	410.71	NIOBRARA A :
7253.90	35.53	0.00	7163.00	406.68	-461.00	10.00	0.00	433.21	NIOBRARA B :
7300.00	40.14	0.00	7199.40	434.95	-461.00	10.00	0.00	461.47	
7367.03	46.84	0.00	7248.00	481.05	-461.00	10.00	0.00	507.58	NIOBRARA C :
7400.00	50.14	0.00	7269.85	505.74	-461.00	10.00	0.00	532.27	
7500.00	60.14	0.00	7326.93	587.69	-461.00	10.00	0.00	614.21	
7600.00	70.14	0.00	7368.92	678.31	-461.00	10.00	0.00	704.83	
7622.02	72.34	0.00	7376.00	699.15	-461.00	10.00	0.00	725.68	FORT HAYS :
7700.00	80.14	0.00	7394.53	774.84	-461.00	10.00	0.00	801.36	
7722.87	82.43	0.00	7398.00	797.45	-461.00	10.00	0.00	823.97	CODELL :
7799.30	90.07	0.00	7403.00	873.66	-461.00	10.00	0.00	900.18	7 in
7799.30	90.07	0.00	7403.00	873.66	-461.00	0.00	0.00	900.18	
7800.00	90.07	0.00	7403.00	874.36	-461.00	0.00	0.00	900.88	
7900.00	90.07	0.00	7402.87	974.36	-461.00	0.00	0.00	1000.87	
8000.00	90.07	0.00	7402.75	1074.36	-461.00	0.00	0.00	1100.87	
8100.00	90.07	0.00	7402.63	1174.36	-461.00	0.00	0.00	1200.87	
8200.00	90.07	0.00	7402.51	1274.36	-461.00	0.00	0.00	1300.87	
8300.00	90.07	0.00	7402.39	1374.36	-461.00	0.00	0.00	1400.87	
8400.00	90.07	0.00	7402.26	1474.36	-461.00	0.00	0.00	1500.86	
8500.00	90.07	0.00	7402.14	1574.36	-461.00	0.00	0.00	1600.86	
8600.00	90.07	0.00	7402.02	1674.35	-461.00	0.00	0.00	1700.86	
8700.00	90.07	0.00	7401.90	1774.35	-461.00	0.00	0.00	1800.86	
8800.00	90.07	0.00	7401.77	1874.35	-461.00	0.00	0.00	1900.86	
8900.00	90.07	0.00	7401.65	1974.35	-461.00	0.00	0.00	2000.86	
9000.00	90.07	0.00	7401.53	2074.35	-461.00	0.00	0.00	2100.85	
9100.00	90.07	0.00	7401.41	2174.35	-461.00	0.00	0.00	2200.85	
9200.00	90.07	0.00	7401.29	2274.35	-461.00	0.00	0.00	2300.85	
9300.00	90.07	0.00	7401.16	2374.35	-461.00	0.00	0.00	2400.85	
9400.00	90.07	0.00	7401.04	2474.35	-461.00	0.00	0.00	2500.85	
9500.00	90.07	0.00	7400.92	2574.35	-461.00	0.00	0.00	2600.85	
9600.00	90.07	0.00	7400.80	2674.35	-461.00	0.00	0.00	2700.84	
9700.00	90.07	0.00	7400.68	2774.35	-461.00	0.00	0.00	2800.84	
9800.00	90.07	0.00	7400.55	2874.35	-461.00	0.00	0.00	2900.84	
9900.00	90.07	0.00	7400.43	2974.35	-461.00	0.00	0.00	3000.84	
10000.00	90.07	0.00	7400.31	3074.35	-461.00	0.00	0.00	3100.84	
10100.00	90.07	0.00	7400.19	3174.35	-461.00	0.00	0.00	3200.84	
10200.00	90.07	0.00	7400.06	3274.35	-461.00	0.00	0.00	3300.83	

## 5D Plan Report

Interpolated Points (Relative to centre, TVD relative to Drill Floor )										Comment
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)		
10300.00	90.07	0.00	7399.94	3374.35	-461.00	0.00	0.00	3400.83		
10400.00	90.07	0.00	7399.82	3474.35	-461.00	0.00	0.00	3500.83		
10500.00	90.07	0.00	7399.70	3574.35	-461.00	0.00	0.00	3600.83		
10600.00	90.07	0.00	7399.58	3674.35	-461.00	0.00	0.00	3700.83		
10700.00	90.07	0.00	7399.45	3774.35	-461.00	0.00	0.00	3800.83		
10800.00	90.07	0.00	7399.33	3874.35	-461.00	0.00	0.00	3900.82		
10900.00	90.07	0.00	7399.21	3974.35	-461.00	0.00	0.00	4000.82		
11000.00	90.07	0.00	7399.09	4074.35	-461.00	0.00	0.00	4100.82		
11100.00	90.07	0.00	7398.96	4174.35	-461.00	0.00	0.00	4200.82		
11200.00	90.07	0.00	7398.84	4274.35	-461.00	0.00	0.00	4300.82		
11300.00	90.07	0.00	7398.72	4374.35	-461.00	0.00	0.00	4400.81		
11400.00	90.07	0.00	7398.60	4474.35	-461.00	0.00	0.00	4500.81		
11500.00	90.07	0.00	7398.48	4574.35	-461.00	0.00	0.00	4600.81		
11600.00	90.07	0.00	7398.35	4674.35	-461.00	0.00	0.00	4700.81		
11700.00	90.07	0.00	7398.23	4774.35	-461.00	0.00	0.00	4800.81		
11800.00	90.07	0.00	7398.11	4874.35	-461.00	0.00	0.00	4900.81		
11900.00	90.07	0.00	7397.99	4974.35	-461.00	0.00	0.00	5000.80		
12000.00	90.07	0.00	7397.87	5074.35	-461.00	0.00	0.00	5100.80		
12100.00	90.07	0.00	7397.74	5174.35	-461.00	0.00	0.00	5200.80		
12200.00	90.07	0.00	7397.62	5274.35	-461.00	0.00	0.00	5300.80		
12300.00	90.07	0.00	7397.50	5374.35	-461.00	0.00	0.00	5400.80		
12400.00	90.07	0.00	7397.38	5474.35	-461.00	0.00	0.00	5500.80		
12500.00	90.07	0.00	7397.25	5574.35	-461.00	0.00	0.00	5600.79		
12600.00	90.07	0.00	7397.13	5674.35	-461.00	0.00	0.00	5700.79		
12700.00	90.07	0.00	7397.01	5774.35	-461.00	0.00	0.00	5800.79		
12800.00	90.07	0.00	7396.89	5874.35	-461.00	0.00	0.00	5900.79		
12900.00	90.07	0.00	7396.77	5974.35	-461.00	0.00	0.00	6000.79		
12999.30	90.07	0.00	7396.64	6073.66	-461.00	0.00	0.00	6100.09		
13000.00	90.07	359.98	7396.64	6074.35	-461.00	2.67	270.00	6100.79		
13100.00	90.07	357.31	7396.52	6174.31	-463.36	2.67	270.00	6200.73		
13200.00	90.07	354.65	7396.40	6274.06	-470.37	2.67	270.00	6300.44		
13299.30	90.07	352.00	7396.28	6372.68	-481.91	2.67	270.00	6398.99		
13300.00	90.07	352.02	7396.28	6373.37	-482.01	2.67	89.99	6399.68		
13400.00	90.07	354.69	7396.15	6472.69	-493.59	2.67	89.99	6498.93		
13500.00	90.07	357.35	7396.03	6572.44	-500.53	2.67	89.99	6598.64		
13600.00	90.07	0.02	7395.91	6672.40	-502.82	2.67	90.00	6698.59		
13700.00	90.07	2.69	7395.78	6772.37	-500.46	2.67	90.00	6798.56		
13800.00	90.07	5.35	7395.66	6872.11	-493.46	2.67	90.00	6898.35		
13899.30	90.07	8.00	7395.54	6970.73	-481.91	2.67	90.01	6997.03		
13900.00	90.07	7.99	7395.54	6971.42	-481.82	2.00	269.99	6997.72		
14000.00	90.07	5.99	7395.42	7070.68	-469.65	2.00	269.99	7097.04		



## 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
14100.00	90.07	3.99	7395.30	7170.29	-460.96	2.00	269.98	7196.71	
14200.00	90.07	1.99	7395.18	7270.15	-455.75	2.00	269.98	7296.59	
14254.14	90.07	0.90	7395.11	7324.27	-454.39	2.00	269.98	7350.72	
14300.00	90.07	0.90	7395.06	7370.13	-453.67	0.00	0.00	7396.58	
14400.00	90.07	0.90	7394.94	7470.11	-452.09	0.00	0.00	7496.58	
14500.00	90.07	0.90	7394.82	7570.10	-450.51	0.00	0.00	7596.57	
14600.00	90.07	0.90	7394.70	7670.09	-448.94	0.00	0.00	7696.57	
14700.00	90.07	0.90	7394.58	7770.08	-447.36	0.00	0.00	7796.56	
14800.00	90.07	0.90	7394.46	7870.06	-445.78	0.00	0.00	7896.56	
14900.00	90.07	0.90	7394.35	7970.05	-444.21	0.00	0.00	7996.55	
15000.00	90.07	0.90	7394.23	8070.04	-442.63	0.00	0.00	8096.55	
15100.00	90.07	0.90	7394.11	8170.03	-441.05	0.00	0.00	8196.54	
15200.00	90.07	0.90	7393.99	8270.01	-439.48	0.00	0.00	8296.54	
15300.00	90.07	0.90	7393.87	8370.00	-437.90	0.00	0.00	8396.53	
15400.00	90.07	0.90	7393.75	8469.99	-436.32	0.00	0.00	8496.53	
15500.00	90.07	0.90	7393.64	8569.98	-434.75	0.00	0.00	8596.52	
15600.00	90.07	0.90	7393.52	8669.96	-433.17	0.00	0.00	8696.52	
15700.00	90.07	0.90	7393.40	8769.95	-431.59	0.00	0.00	8796.51	
15800.00	90.07	0.90	7393.28	8869.94	-430.02	0.00	0.00	8896.51	
15900.00	90.07	0.90	7393.16	8969.93	-428.44	0.00	0.00	8996.50	
16000.00	90.07	0.90	7393.04	9069.91	-426.87	0.00	0.00	9096.49	
16100.00	90.07	0.90	7392.92	9169.90	-425.29	0.00	0.00	9196.49	
16200.00	90.07	0.90	7392.81	9269.89	-423.71	0.00	0.00	9296.48	
16300.00	90.07	0.90	7392.69	9369.88	-422.14	0.00	0.00	9396.48	
16400.00	90.07	0.90	7392.57	9469.86	-420.56	0.00	0.00	9496.47	
16500.00	90.07	0.90	7392.45	9569.85	-418.98	0.00	0.00	9596.47	
16600.00	90.07	0.90	7392.33	9669.84	-417.41	0.00	0.00	9696.46	
16700.00	90.07	0.90	7392.21	9769.83	-415.83	0.00	0.00	9796.46	
16800.00	90.07	0.90	7392.09	9869.81	-414.25	0.00	0.00	9896.45	
16900.00	90.07	0.90	7391.98	9969.80	-412.68	0.00	0.00	9996.45	
17000.00	90.07	0.90	7391.86	10069.79	-411.10	0.00	0.00	10096.44	
17100.00	90.07	0.90	7391.74	10169.78	-409.52	0.00	0.00	10196.44	
17200.00	90.07	0.90	7391.62	10269.76	-407.95	0.00	0.00	10296.43	
17300.00	90.07	0.90	7391.50	10369.75	-406.37	0.00	0.00	10396.43	
17400.00	90.07	0.90	7391.38	10469.74	-404.79	0.00	0.00	10496.42	
17500.00	90.07	0.90	7391.26	10569.73	-403.22	0.00	0.00	10596.42	
17600.00	90.07	0.90	7391.15	10669.71	-401.64	0.00	0.00	10696.41	
17700.00	90.07	0.90	7391.03	10769.70	-400.06	0.00	0.00	10796.41	
17723.19	90.07	0.90	7391.00	10792.89	-399.70	0.00	0.00	10819.60	

## 5D Plan Report

Formation Points	(Relative to centre, TVD relative to Drill Floor )		
Name	MD (US ft)	TVD (US ft)	
SHARON SPRINGS	7136.33	7061.00	
NIOBRARA A	7213.12	7129.00	
NIOBRARA B	7253.90	7163.00	
NIOBRARA C	7367.03	7248.00	
FORT HAYS	7622.02	7376.00	
CODELL	7722.87	7398.00	