

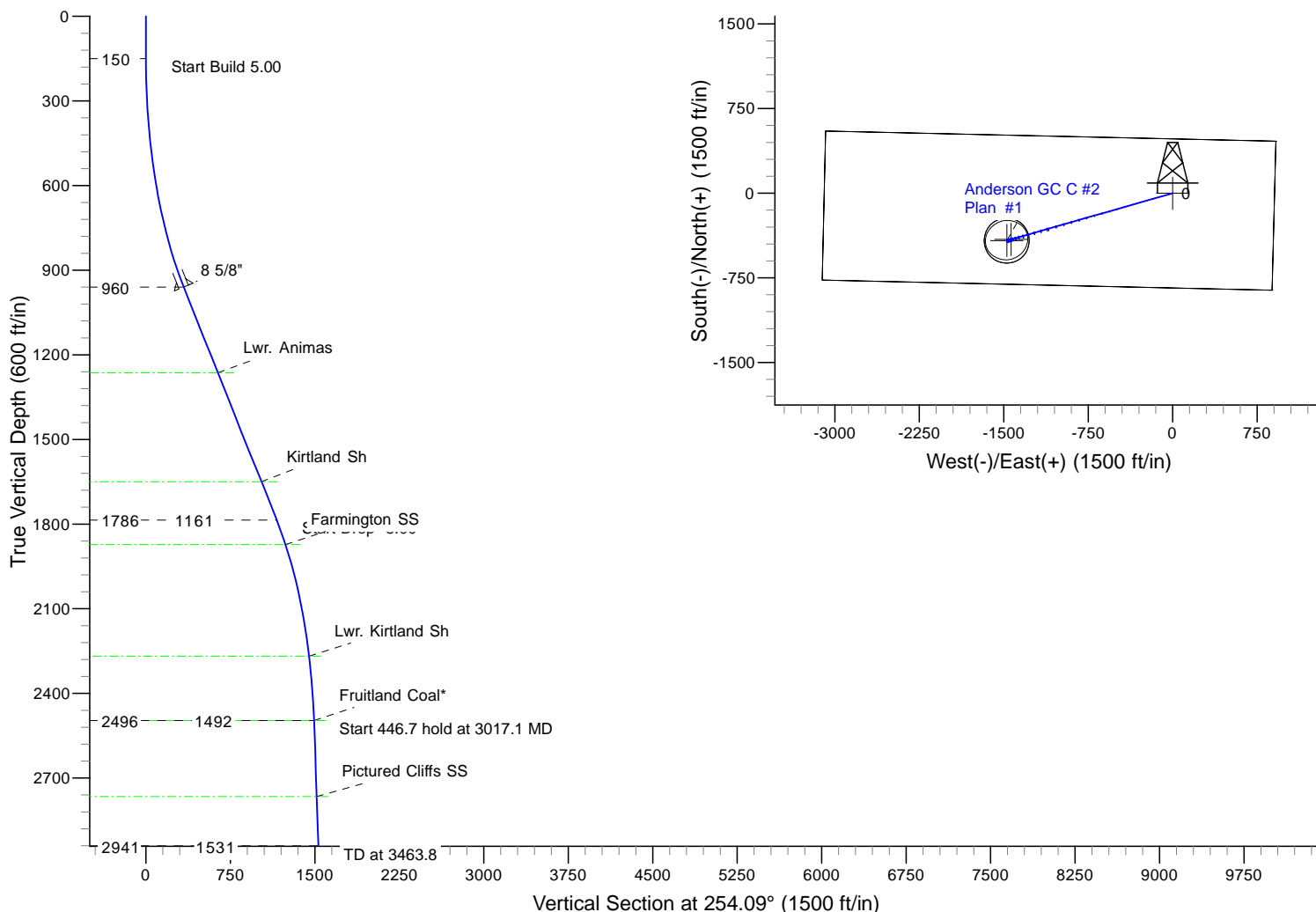
Project: Western - San Juan North (NAD 83)
 Site: SEC 24 -T34N-R08W
 Well: Anderson GC C #2
 Wellbore: Anderson GC C #2
 Design: Plan #1



SECTION DETAILS											FORMATION TOP DETAILS		
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target	TVDPath	MDPath	Formation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		1264.0	1479.5	Lwr. Animas
2	150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.0		1650.0	2025.4	Kirtland Sh
3	1050.0	45.00	254.09	960.3	-92.0	-322.7	5.00	254.09	335.6		1873.0	2334.9	Farmington SS
4	2217.2	45.00	254.09	1785.6	-318.2	-1116.4	0.00	0.00	1160.9		2268.0	2784.6	Lwr. Kirtland Sh
5	3017.1	5.00	254.09	2496.0	-409.0	-1435.0	5.00	180.00	1492.1	Anderson GC C #2 FC	2496.0	3017.1	Fruitland Coal*
6	3463.8	5.00	254.09	2941.0	-419.7	-1472.4	0.00	0.00	1531.1	Anderson GC C #2 PBHL	2766.0	3288.1	Pictured Cliffs SS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Anderson GC C #2 Drilling Window	0.0	0.0	0.0	1191848.94	2369354.80	37° 10' 24.528 N	107° 39' 52.560 W	Polygon
Anderson GC C #2 FC	2496.0	-409.0	-1435.0	1191439.93	2367919.79	37° 10' 20.156 N	107° 40' 10.168 W	Circle (Radius: 200.0)
Anderson GC C #2 PBHL	2941.0	-419.7	-1472.4	1191429.23	2367882.39	37° 10' 20.042 N	107° 40' 10.627 W	Point



<p>Azimuths to Grid North True North: 1.33° Magnetic North: 11.18° Magnetic Field Strength: 50916.0snT Dip Angle: 63.84° Date: 12/7/2011 Model: BGGM2011</p>	PROJECT DETAILS	WELL SURFACE DETAILS	PLAN APPROVAL: 12:55, December 15 2011
	Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Southern Zone System Datum: Mean Sea Level	Ground Level: 6668.0 Ref. Sec.: Slot - (0.0N, 0.0E) North: 1191848.93 East: 2369354.80 Lat: 37° 10' 24.528 N Long: 107° 39' 52.560 W	Created By: Kimberly Sands Checked: Kimberly Sands Reviewed: Kelli Fereday Approved: _____

North America - Onshore US - BP

Western - San Juan North (NAD 83)

SEC 24 -T34N-R08W

Anderson GC C #2

Anderson GC C #2

Plan: Plan #1

Standard Planning Report

15 December, 2011

BPPASSPORT

Planning Report

Database:	EDM .16 Hou Prod - WH21P	Local Co-ordinate Reference:	Well Anderson GC C #2
Company:	North America - Onshore US - BP	TVD Reference:	WELL @ 6684.0ft (Original Well Elev)
Project:	Western - San Juan North (NAD 83)	MD Reference:	WELL @ 6684.0ft (Original Well Elev)
Site:	SEC 24 -T34N-R08W	North Reference:	Grid
Well:	Anderson GC C #2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Anderson GC C #2		
Design:	Plan #1		

Project	Western - San Juan North (NAD 83), LAPLATA COUNTY COLORADO, USA		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		Using geodetic scale factor

Site	SEC 24 -T34N-R08W		
Site Position:		Northing:	1,194,597.12 ft
From:	Lat/Long	Easting:	2,369,739.06 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	37° 10' 51.780 N
		Longitude:	107° 39' 48.600 W
		Grid Convergence:	-1.33 °

Well	Anderson GC C #2		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	37° 10' 24.528 N
		Longitude:	107° 39' 52.560 W
		Ground Level:	6,668.0 ft

Wellbore	Anderson GC C #2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2011	12/7/2011	9.85	63.85	50,916

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	254.09

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,050.0	45.00	254.09	960.3	-92.0	-322.7	5.00	5.00	0.00	254.09	
2,217.2	45.00	254.09	1,785.6	-318.2	-1,116.4	0.00	0.00	0.00	0.00	
3,017.1	5.00	254.09	2,496.0	-409.0	-1,435.0	5.00	-5.00	0.00	180.00	Anderson GC C #2
3,463.8	5.00	254.09	2,941.0	-419.7	-1,472.4	0.00	0.00	0.00	0.00	Anderson GC C #2

BPPASSPORT

Planning Report

Database:	EDM .16 Hou Prod - WH21P	Local Co-ordinate Reference:	Well Anderson GC C #2
Company:	North America - Onshore US - BP	TVD Reference:	WELL @ 6684.0ft (Original Well Elev)
Project:	Western - San Juan North (NAD 83)	MD Reference:	WELL @ 6684.0ft (Original Well Elev)
Site:	SEC 24 -T34N-R08W	North Reference:	Grid
Well:	Anderson GC C #2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Anderson GC C #2		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	2.50	254.09	200.0	-0.3	-1.0	1.1	5.00	5.00	0.00
300.0	7.50	254.09	299.6	-2.7	-9.4	9.8	5.00	5.00	0.00
400.0	12.50	254.09	398.0	-7.4	-26.1	27.2	5.00	5.00	0.00
500.0	17.50	254.09	494.6	-14.5	-51.0	53.0	5.00	5.00	0.00
600.0	22.50	254.09	588.5	-23.9	-83.9	87.2	5.00	5.00	0.00
700.0	27.50	254.09	679.1	-35.5	-124.5	129.5	5.00	5.00	0.00
800.0	32.50	254.09	765.7	-49.2	-172.6	179.5	5.00	5.00	0.00
900.0	37.50	254.09	847.6	-64.9	-227.7	236.8	5.00	5.00	0.00
1,000.0	42.50	254.09	924.2	-82.5	-289.5	301.1	5.00	5.00	0.00
1,050.0	45.00	254.09	960.3	-92.0	-322.8	335.6	5.00	5.00	0.00
8 5/8"									
1,100.0	45.00	254.09	995.6	-101.7	-356.8	371.0	0.00	0.00	0.00
1,200.0	45.00	254.09	1,066.4	-121.1	-424.8	441.7	0.00	0.00	0.00
1,300.0	45.00	254.09	1,137.1	-140.5	-492.8	512.4	0.00	0.00	0.00
1,400.0	45.00	254.09	1,207.8	-159.8	-560.8	583.1	0.00	0.00	0.00
1,479.5	45.00	254.09	1,264.0	-175.2	-614.8	639.3	0.00	0.00	0.00
Lwr. Animas									
1,500.0	45.00	254.09	1,278.5	-179.2	-628.8	653.8	0.00	0.00	0.00
1,600.0	45.00	254.09	1,349.2	-198.6	-696.8	724.5	0.00	0.00	0.00
1,700.0	45.00	254.09	1,419.9	-218.0	-764.8	795.2	0.00	0.00	0.00
1,800.0	45.00	254.09	1,490.6	-237.4	-832.8	865.9	0.00	0.00	0.00
1,900.0	45.00	254.09	1,561.3	-256.7	-900.8	936.7	0.00	0.00	0.00
2,000.0	45.00	254.09	1,632.1	-276.1	-968.8	1,007.4	0.00	0.00	0.00
2,025.4	45.00	254.09	1,650.0	-281.0	-986.0	1,025.3	0.00	0.00	0.00
Kirtland Sh									
2,100.0	45.00	254.09	1,702.8	-295.5	-1,036.8	1,078.1	0.00	0.00	0.00
2,200.0	45.00	254.09	1,773.5	-314.9	-1,104.8	1,148.8	0.00	0.00	0.00
2,217.2	45.00	254.09	1,785.6	-318.2	-1,116.4	1,160.9	0.00	0.00	0.00
2,300.0	40.86	254.09	1,846.3	-333.7	-1,170.7	1,217.3	5.00	-5.00	0.00
2,334.9	39.11	254.09	1,873.0	-339.8	-1,192.3	1,239.7	5.00	-5.00	0.00
Farmington SS									
2,400.0	35.86	254.09	1,924.7	-350.7	-1,230.4	1,279.4	5.00	-5.00	0.00
2,500.0	30.86	254.09	2,008.2	-365.7	-1,283.2	1,334.3	5.00	-5.00	0.00
2,600.0	25.86	254.09	2,096.1	-378.8	-1,328.9	1,381.8	5.00	-5.00	0.00
2,700.0	20.86	254.09	2,187.9	-389.6	-1,367.0	1,421.4	5.00	-5.00	0.00
2,784.6	16.63	254.09	2,268.0	-397.1	-1,393.1	1,448.6	5.00	-5.00	0.00
Lwr. Kirtland Sh									
2,800.0	15.86	254.09	2,282.8	-398.2	-1,397.3	1,452.9	5.00	-5.00	0.00
2,900.0	10.86	254.09	2,380.1	-404.6	-1,419.5	1,476.0	5.00	-5.00	0.00
3,000.0	5.86	254.09	2,479.0	-408.6	-1,433.4	1,490.5	5.00	-5.00	0.00
3,017.1	5.00	254.09	2,496.0	-409.0	-1,435.0	1,492.1	5.00	-5.00	0.00
Fruitland Coal* - Anderson GC C #2 FC									
3,100.0	5.00	254.09	2,578.6	-411.0	-1,441.9	1,499.4	0.00	0.00	0.00
3,200.0	5.00	254.09	2,678.2	-413.4	-1,450.3	1,508.1	0.00	0.00	0.00
3,288.1	5.00	254.09	2,766.0	-415.5	-1,457.7	1,515.8	0.00	0.00	0.00
Pictured Cliffs SS									
3,300.0	5.00	254.09	2,777.8	-415.8	-1,458.7	1,516.8	0.00	0.00	0.00
3,400.0	5.00	254.09	2,877.4	-418.1	-1,467.1	1,525.5	0.00	0.00	0.00
3,463.8	5.00	254.09	2,941.0	-419.7	-1,472.4	1,531.1	0.00	0.00	0.00
Anderson GC C #2 PBHL									

BPPASSPORT

Planning Report

Database:	EDM .16 Hou Prod - WH21P	Local Co-ordinate Reference:	Well Anderson GC C #2
Company:	North America - Onshore US - BP	TVD Reference:	WELL @ 6684.0ft (Original Well Elev)
Project:	Western - San Juan North (NAD 83)	MD Reference:	WELL @ 6684.0ft (Original Well Elev)
Site:	SEC 24 -T34N-R08W	North Reference:	Grid
Well:	Anderson GC C #2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Anderson GC C #2		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting		
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	Latitude	Longitude
Anderson GC C #2 Dr	0.00	360.00	0.0	0.0	0.0	1,191,848.94	2,369,354.80	37° 10' 24.528 N	107° 39' 52.560 W
- plan hits target center									
- Polygon									
Point 1			0.0	550.4	-3,082.6	1,192,399.34	2,366,272.17		
Point 2			0.0	460.5	916.5	1,192,309.44	2,370,271.31		
Point 3			0.0	-859.1	882.1	1,190,989.83	2,370,236.91		
Point 4			0.0	-769.3	-3,112.4	1,191,079.63	2,366,242.37		
Anderson GC C #2 PFI	0.00	0.00	2,941.0	-419.7	-1,472.4	1,191,429.23	2,367,882.39	37° 10' 20.042 N	107° 40' 10.627 W
- plan hits target center									
- Point									
Anderson GC C #2 FCI	0.00	360.00	2,496.0	-409.0	-1,435.0	1,191,439.93	2,367,919.79	37° 10' 20.156 N	107° 40' 10.168 W
- plan hits target center									
- Circle (radius 200.0)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,050.0	960.3	8 5/8"	8-5/8	12-1/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,479.5	1,264.0	Lwr. Animas		0.00	
2,025.4	1,650.0	Kirtland Sh		0.00	
2,334.9	1,873.0	Farmington SS		0.00	
2,784.6	2,268.0	Lwr. Kirtland Sh		0.00	
3,017.1	2,496.0	Fruitland Coal*		0.00	
3,288.1	2,766.0	Pictured Cliffs SS		0.00	