

DRILLING PROGRAM

YELLOW CREEK FEDERAL 3-34-0364

3,836' FNL and 1,646' FEL (Surface Location)

SWNE, Section 3, T1S, R98W

2,071' FNL and 1,876' FEL (Bottom Hole Location)

Lot 6, Section 3, T1S, R98W

Rio Blanco County, Colorado

Original Federal Lease: COC-59393

1. Estimated Tops

FORMATION / MARKER	True Vertical Depth	Measured Depth	Datum (KB = 6404')
Green River	734'	734'	5,670'
Mahogany	979'	979'	5,425'
B Groove	1,114'	1,114'	5,290'
Top Nahcolite	1,534'	1,539'	4,870'
Base Nahcolite	2,224'	2,264'	4,180'
Blue Marker	2,294'	2,338'	4,110'
Orange Marker	2,489'	2,546'	3,915'
Wasatch	2,654'	2,722'	3,750'
Mesaverde	7,004'	7,294'	-600'
Cameo	9,784'	10,074'	-3,380'
Rollins	10,154'	10,444'	-3,750'
Cozzette	10,294'	10,584'	-3,890'
Corcoran	10,484'	10,774'	-4,080'
Sego 2	11,164'	11,454'	-4,760'
Sego 1	11,384'	11,674'	-4,980'
Castlegate 2	11,934'	12,224'	-5,530'
Castlegate 1	12,154'	12,444'	-5,750'
TD	12,254'	12,544'	-5,850'

2. Prospective Formation Depth

The prospective formation depth is the Mesaverde group which occurs from the top of the Mesaverde section at 7,004' TVD (7,294' MD) to TD at 12,254' TVD (12,544' MD). The entire interval is prospective for gas and associated condensate (oil).

3. BOPE Specifications

The anticipated bottom-hole pressure will be no greater than a 0.50 psi/ft pressure gradient. A 5,000 psi WP BOP system as described in Figure 1 of this Drilling Plan will be installed and maintained when drilling out of the surface casing. There are no shallow drilling hazards

expected while drilling the surface hole, therefore a diverter will not be necessary nor installed. The BOP system including the casing will be pressure tested to minimum standards set forth in "Onshore order #2". The BOP will be mechanically checked daily during drilling operations and pressure tested to 250 psi low pressure and 5,000 psi high pressure on the following schedule:

- Upon initial installation
- After any component change
- Thirty days after previous test
- As required by well conditions

NOTE: The annular preventer will be tested to a 250 psi low pressure and 2,500 psi high pressure. Along with the BOPs, the upper kelly cock, full opening stabbing valve and choke manifold will be tested to the rated pressures (250 psi low and 5,000 psi high).

4. Casing Program/Design

				Safety Factors			
String	Size-Wt-Grade	Conn	Interval/ (Hole Size)	Burst	Collapse	Tension	
Conductor	20" 104# K55 (0.5" wall)	-	0 – 60'	-	-	-	
Surface	9.625" 36# K55 (New)	BTC	0 – 3,515' (14.75")	1.60	1.23	6.92	
Production	5.5" 17# HCP110 (New)	LTC	0 – 12,544' (8.75")	2.37	1.39	2.44	
					Recommended Make-Up Torque		
	Air Weight (lbs)	Buoyed Wt. (lbs)	Max Pull (lbs)	Max Press. (psi)	Optimum (ft-lbs)		
Surface	126,540	109,077	604,000	2,816	See note		
Production	213,248	182,327	356,000	8,512	6,270		
Note:	Make up surface casing with BTC connections to stenciled mark on casing.						

Design Criteria Used:					
	Surface Pressure (psi)	Frac. Grad. @ Shoe (ppg)	Backup Grad. (ppg)	Packer Fluid (ppg)	Fluid Weight Casing Set In (ppg)
Surface	2,193	13.0	8.7	-	9.0
Production	4,480	-	9.0	-	9.5

5. Cement Program/Design

Surface Casing:

- The surface will be cemented from 3,515' to the surface using two stages utilizing a stage tool at 1,539' (top of the Nacholite interval).
 - Stage 1: 3,515' – 1,539' (includes 25% excess volume over gauge hole)
 - 50 bbl fresh water spacer
 - 700 sx lead cement comprised of Halliburton ECONOCER + retarder mixed at 12.7 ppg with a yield of 1.87 ft³/sk
 - 340 sx tail cement comprised of Halliburton HALCER + retarder mixed at 15.8 ppg with a yield of 1.15 ft³/sk
 - 265 bbl drilling mud displacement at 9 ppg
 - Stage 2: 1,539' – 0' (includes 75% excess volume over gauge hole)
 - 50 bbl fresh water spacer
 - 1,000 sx lead cement comprised of Halliburton ECONOCER + retarder mixed at 12.7 ppg with a yield of 1.87 ft³/sk
 - 119 bbl drilling mud displacement at 9 ppg
 - Top Out Cement
 - 200 sx Halliburton Premium + 2% CaCl₂ (accelerator)

NOTE: Slurries used will be the slurries listed above, or equivalent slurries depending on service provider selected. In the event, the slurries listed above are not used, the total volume in cubic feet will be used, regardless of the cement yield.

Production Casing:

- The production casing will be cemented from TD to a minimum of 200' inside the 9-5/8" surface casing using a conventional one stage cementing operation. The volume will be based on open-hole caliper volume with an additional 50% excess.
 - Stage 1
 - 40 bbl Superflush 101 (reactive spacer) mixed at 10 ppg
 - 10 bbl fresh water spacer
 - 3,685' of lead cement comprised of Halliburton EXTENDACER + 1.5 lb/sk Pheno Seal – Blend (lost circulation material – LCM) + 1.5 lb/sk Walnut Hulls 10/40 (LCM) + 0.25 lb/sk Poly-E-Flake (LCM) mixed at 11 ppg with a yield of 2.76 ft³/sk
 - 2,000' of lead cement comprised of Halliburton ECONOCER + retarder + 0.25 lb/sk Poly-E-Flake (LCM) + 1 lb/sk Walnut Shells (LCM) + 0.3% STEELSEAL (LCM) + 1 lb/sk Pheno Seal – Blend (LCM) mixed at 12.7 ppg with a yield of 1.93 ft³/sk
 - 3,544' of tail cement comprised of Halliburton EXPANDACER + retarder + 8 lb/sk Gilsonite (LCM) + Super CBL (expander) + 0.25 lb/sk Poly-E-Flake (LCM) + 1 lb/sk Pheno Seal – Blend (LCM) + 1 lb/sk Walnut Shells (LCM) + 0.3% STEELSEAL (LCM) mixed at 13.5 ppg with a yield of 1.73 ft³/sk

NOTE: Slurries used will be the slurries listed above, or equivalent slurries depending on service provider selected.

6. Mud Program/Design

Interval	Hole Size (in)	Mud Type	Mud Weight (ppg)	Viscosity (sec/qt)	Yield Point (lb/100 ft ²)	API Fluid Loss (ml/30min)	Total Solids (%)
0 – 3,515'	14.75	Water/LNSD	8.3 – 9.2	38 – 100	4 – 28	4 – 28	6 – 30
3,515' – 12,544'	8.75	Water/LNSD/AIR/N ₂	9.0 – 9.5	40 – 75	5 – 25	4 – 15	6 – 30

Though water-based mud will be utilized throughout the drilling of the well, air/nitrogen may be introduced to the system when drilling the production hole to combat potential fluid loss problems. A parasite string will be installed on the surface casing to allow “lightening” of the fluid column while drilling the production hole interval (3,515' – 12,544') in the event that it is required. The compressor will be located approximately 100' – 150' from the wellbore. The exact placement will depend on rig and location layout. A rotating head will be utilized (see attached BOP schematic) and the returns will be sent through a gas buster and expelled to the atmosphere.

There will be sufficient mud on location to control a blowout should one occur.

Mud test will be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

7. Testing, Logging and Coring Procedures

Testing	None anticipated.
Coring	Sidewall cores may be taken during logging operations. Conventional cores are not planned depending upon results from logging evaluation.
Logging	Triple combo from TD to surface casing. Gamma Ray from surface casing shoe to surface. FMI is possible within the Mesaverde.
Sampling	Samples will be taken from surface casing drillout to TD.

8. Bottom-hole Pressures and Potential Drilling Hazards

The expected bottom hole pressure is +/- 5,730 psi based on a 9.0 ppg pore pressure gradient at 12,254' TVD. No abnormal pressures are anticipated. No hydrogen sulfide gas is anticipated.

There is potential for fluid losses while drilling the surface hole (0' – 3,515') in the Nahcolite interval (1,539' – 2,264' MD). If severe losses occur, the losses will be combated with LCM and cement while drilling. A stage tool and two-stage cement operation will be utilized to provide sufficient cement in the surface casing annulus, allowing cement returns to the surface.

There is potential for fluid losses while drilling the production interval (3,515' – TD) due to the natural fractures occurring in the Mesaverde formations. A parasite string installed near the shoe of the surface casing along with nitrogen and/or air injection will be utilized to lighten the density of

the drilling fluid to maintain full mud returns. The nitrogen and/or air will be sent through the gas buster and expelled to the atmosphere.

9. Miscellaneous

The anticipated spud date is during the 4th quarter of 2011, depending on APD approval, location construction and rig availability. The anticipated duration of the operation is 40 days (rig mobilization through rig release).

This well is designed as an S-type directional well with a KOP of 936'. The wellbore will build at 2° per 100' to a maximum inclination angle of 20° and will maintain that angle until a depth of 5,900', when it drops at a rate of 1.5° per 100' to vertical by the top of the Mesaverde formation at 7,004' TVD (7,289' MD). The directional design and schematic are attached.

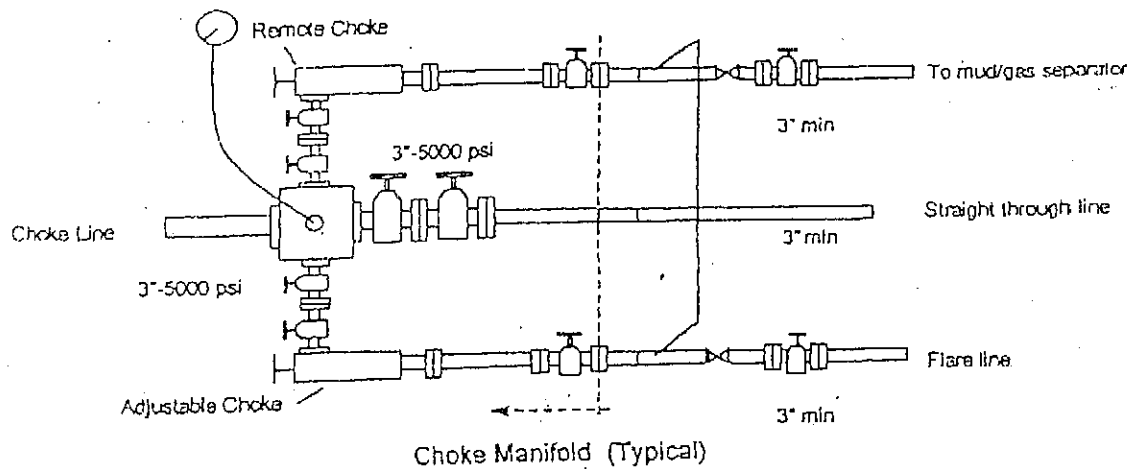
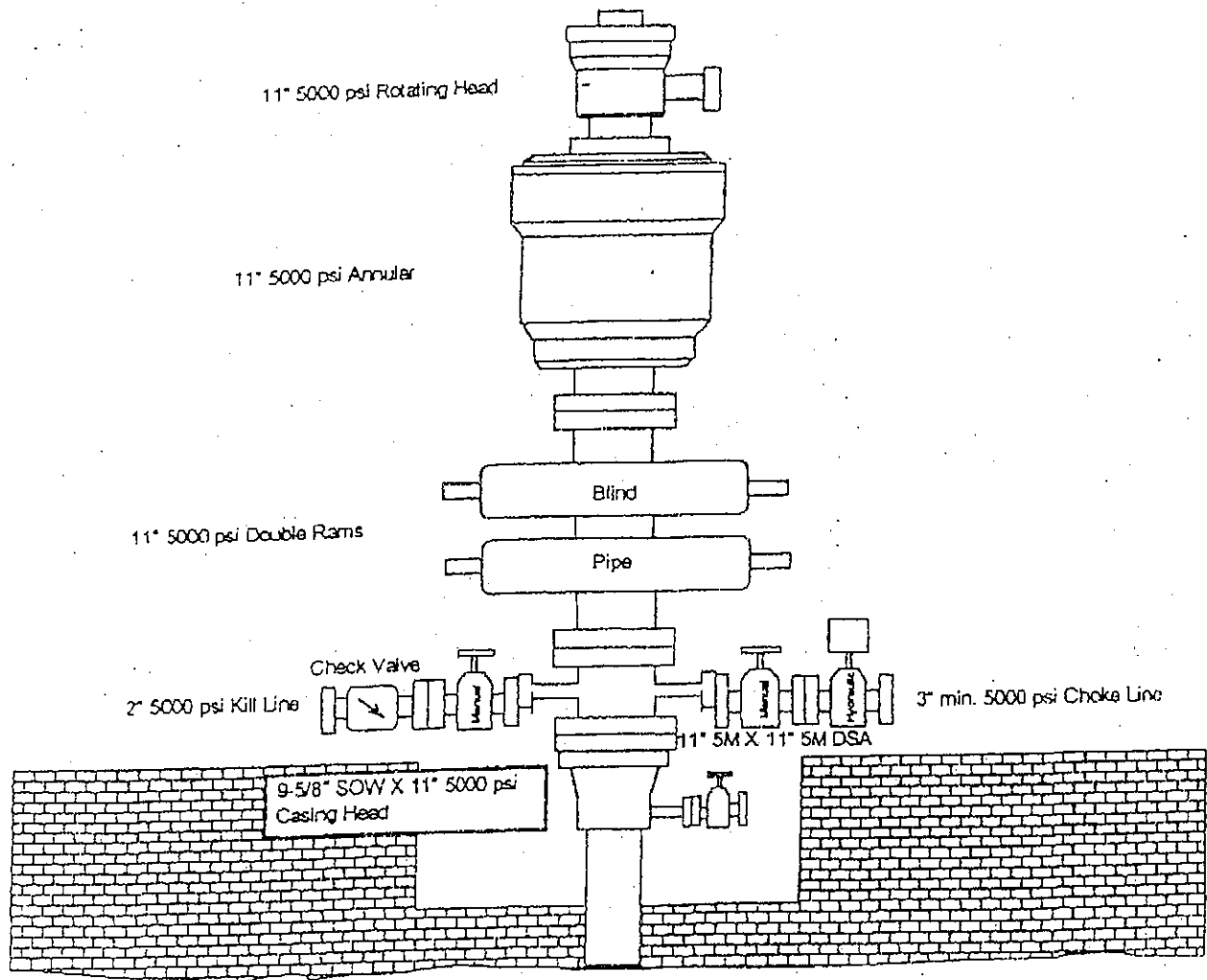
PERMITTING PERSON

Reed Haddock
Regulatory Analyst
BOPCO, L.P.
9949 S. Oswego St.
Suite 200
Parker, CO 80134
(O) 303-799-5080

DRILLING OPERATIONS

Jeffrey S. Fooshee
Division Drilling and Production Superintendent
BOPCO, L.P.
9949 S. Oswego St.
Suite 200
Parker, CO 80134
(O) 303-799-5080

BOPE Diagram 5000 psi WP



Well: YCF 3-34-0364
Well Type: S-Type Directional Well
Surface Location: 3836' FNL and 1646' FEL of Section 3, T1S, R98W
Latitude / Longitude: Lat: 39.99508° N, Long: 108.37384° W (NAD 83)
Bottom Hole Location: 2071' FNL and 1876' FEL of Section 3, T1S, R98W
Permitted TD: 12544' MD
Author-Version-Date: Jeffrey S. Fooshee - v1 - 1-14-2011

AFE Number: TBD
Field: Yellow Creek Federal
API Well Number: TBD
Elevation (ft): 6379'
KB to GL (ft): 25'
Objectives: Mesaverde

Geology	BOP Testing	Casing and Cement Design	Depth	Formation	Directional and Mud Data
Logs	Requirement		(ft, MD)	Hole Size	LOT/FIT
20" Conductor @ 60'					
Formation	Top	Casing			Directional Control
Green River	734'	9-5/8" 36# K-55 BTC @ 3515'			<p>The wellbore is designed as an S-type directional well with a KOP of 936'. The wellbore will build at 2° per 100' to a maximum inclination angle of 20° and will maintain that angle until a depth of 5900', when it drops at a rate of 1.5° per 100' to vertical by the top of the Mesaverde formation at 7004' TVD (7289' MD). The inclination, drift and azimuth will be monitored w/ an MWD and controlled with a steerable BHA.</p>
Mahogany	979'				
B Groove	1114'				
Top Nahcolite	1539'				
		Cement			Mud Program
		Two Stage w/ stage tool at 1539'			<p>Water or fresh-water based (LNSD) mud will be used to drill this hole section. The anticipated MW range is 8.3 - 9.2 ppg. If severe fluid losses occur, they will be treated with LCM and/or cement. The Nahcolite interval from 1539' - 2264' is a potential under-pressured formation. Adjust MW and properties to keep a balanced system.</p>
		Stage 1 (1539' - 3515')			
Base Nahcolite	2264'	700 sx ECONOCCEM + retarder (12.7 ppg, 1.87 ft ³ /sk) lead & 340 sx HALCEM w/ retarder (15.8 ppg, 1.15 ft ³ /sk) tail			
		Stage 2 (0' - 1539')			
Wasatch	2722'	1000 sx HALCEM + retarder (12.7 ppg, 1.87 ft ³ /sk) lead & 200 sx Premium w/ 2% CaCl ₂ topout (15.8 ppg, 1.16 ft ³ /sk)			
Logs					LOT or 13.0
Gamma Ray			3515' (3400' TVD)		ppg
		Casing			Directional Control
		5.5" 17# HCP-110 LTC @ 12544'			<p>The wellbore is designed as an S-type directional well with a KOP of 936'. The wellbore will build at 2° per 100' to a maximum inclination angle of 20° and will maintain that angle until a depth of 5900', when it drops at a rate of 1.5° per 100' to vertical by the top of the Mesaverde formation at 7004' TVD (7289' MD). The inclination, drift and azimuth will be monitored w/ an MWD and controlled with a steerable BHA.</p>
		Cement			
		Lead #1 (3315' - 7000')			
Mesaverde	7294'				Mud Program
		3685' EXTENDACEM + 1.5 lb/sk Pheno Seal - Blend + 1.5 lb/sk Walnut Hulls			
Cameo	10074'	10/40 + 0.25 lb/sk Poly-E-Flake (11 ppg, 2.76ft ³ /sk)			
		Lead #2 (7000' - 9000')			
		2000' ECONOCCEM + retarder +0.25 lb/sk Poly-E-Flake + 1 lb/sk Walnut Shells + 0.3% STEELSEAL + 1 lb/sk Pheno Seal - Blend (12.7 ppg, 1.93 ft ³ /sk)			<p>Fresh-water based (LNSD) mud and/or Air/N₂ will be used to drill this hole section. The anticipated MW range is 9.0 - 9.5 ppg. The surface casing will have a parasite string installed near the to allow the addition of Air/N₂ to allow lightening of the slurry to keep the well balanced and returns full.</p>
Rollins	10444'				
Cozzette	10584'				
Corcoran	10774'				
		Tail (9000' - 12544')			
		3544' EXPANDACEM + retarder + 8 lb/sk Gilsonite + 0.2% Super CBL + 0.25 lb/sk Poly-E-Flake + 1 lb/sk Pheno Seal - Blend			
Sego 2	11454'	+ 1 lb/sk Walnut Shells + 0.3% STEELSEAL (13.5 ppg, 1.73 ft ³ /sk)			
Sego 1	11674'				
Castlegate 2	12224'				
Castlegate 1	12444'				
Logs					
Triple combo, possible FMI			12544' (12254' TVD)		

Prepared By: Jeffrey S. Fooshee

Date: 14-Jan-11

BOPCO

Sec 3 T1N R98W

Yellow Creek Federal 3-34-0364 Pad

YCF 3-34-0364

Wellbore #1

Plan: 20° Max, Plan #2

Standard Planning Report - Geographic

13 January, 2011

New Tech

Planning Report - Geographic

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well YCF 3-34-0364
Company:	BOPCO	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Sec 3 T1N R98W	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Yellow Creek Federal 3-34-0364 Pad	North Reference:	True
Well:	YCF 3-34-0364	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	20° Max, Plan #2		

Project	Sec 3 T1N R98W, Rio Blanco County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		Yellow Creek Federal 3-34-0364 Pad				
Site Position:		Northing:	382,251.05 m	Latitude:	39° 59' 42.300 N	
From:	Lat/Long	Easting:	669,027.40 m	Longitude:	108° 22' 25.810 W	
Position Uncertainty:		0.0 ft	Slot Radius:	in	Grid Convergence:	-1.86 °

Well	YCF 3-34-0364					
Well Position	+N/-S	0.0 ft	Northing:	382,251.05 m	Latitude:	39° 59' 42.300 N
	+E/-W	0.0 ft	Easting:	669,027.40 m	Longitude:	108° 22' 25.810 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	0.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	10.76	66.13	52,695

Design	20° Max, Plan #2			
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	354.36

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	
936.0	0.00	0.00	936.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,936.0	20.00	354.36	1,915.8	171.9	-17.0	2.00	2.00	0.00	354.36	
5,955.6	20.00	354.36	5,693.0	1,540.1	-152.1	0.00	0.00	0.00	0.00	
7,288.9	0.00	0.00	6,999.4	1,769.3	-174.7	1.50	-1.50	0.00	180.00	
12,543.5	0.00	0.00	12,254.0	1,769.3	-174.7	0.00	0.00	0.00	0.00	

New Tech

Planning Report - Geographic

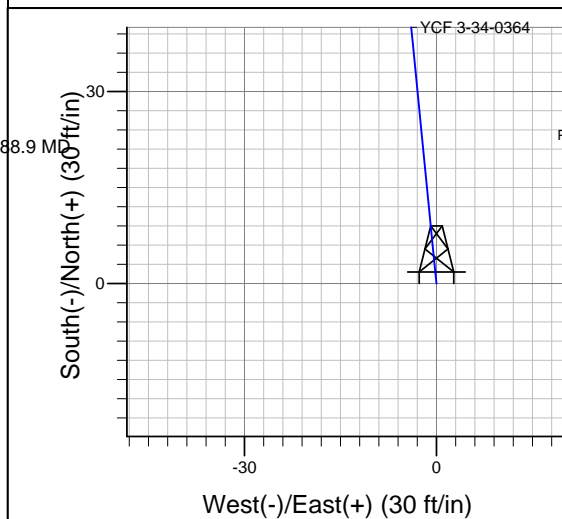
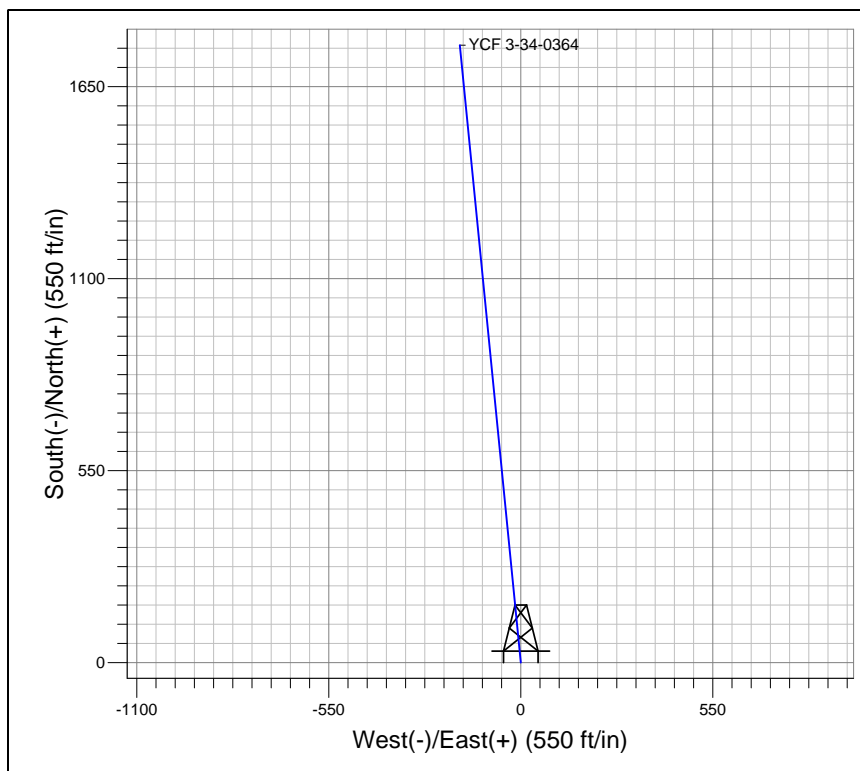
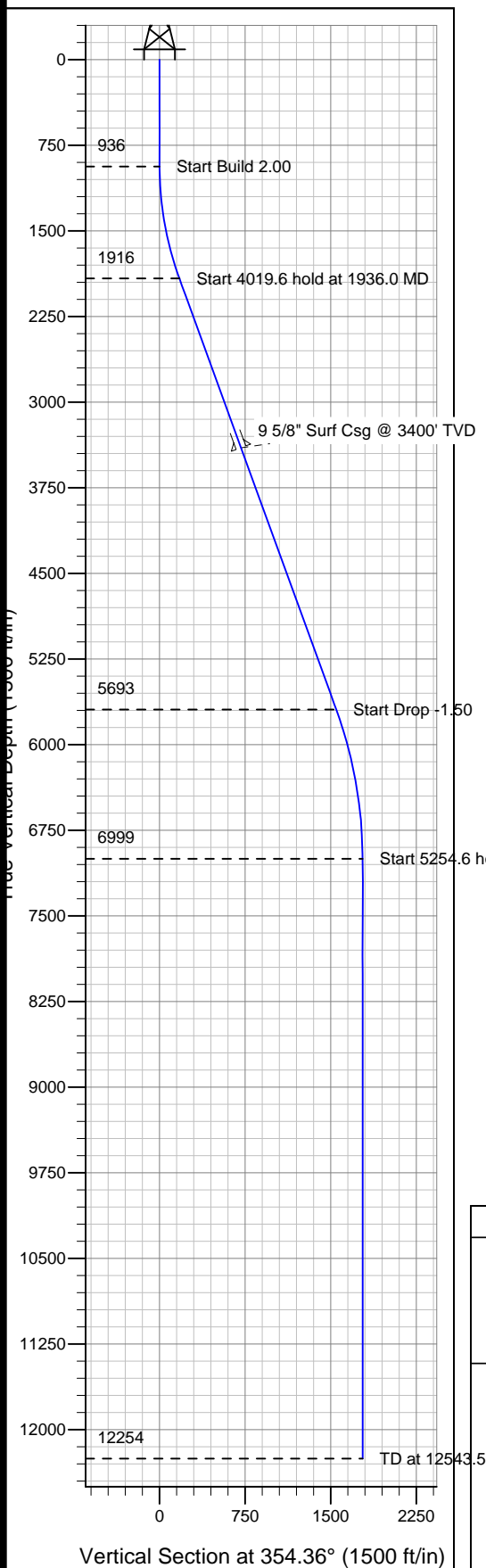
Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well YCF 3-34-0364
Company:	BOPCO	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Sec 3 T1N R98W	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Yellow Creek Federal 3-34-0364 Pad	North Reference:	True
Well:	YCF 3-34-0364	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	20° Max, Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (m)	Map Easting (m)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	382,251.05	669,027.40	39° 59' 42.300 N	108° 22' 25.810 W
936.0	0.00	0.00	936.0	0.0	0.0	382,251.05	669,027.40	39° 59' 42.300 N	108° 22' 25.810 W
1,936.0	20.00	354.36	1,915.8	171.9	-17.0	382,303.59	669,023.93	39° 59' 43.999 N	108° 22' 26.028 W
3,515.4	20.00	354.36	3,400.0	709.5	-70.1	382,467.88	669,013.07	39° 59' 49.312 N	108° 22' 26.710 W
9 5/8" Surf Csg @ 3400' TVD									
5,955.6	20.00	354.36	5,693.0	1,540.1	-152.1	382,721.70	668,996.29	39° 59' 57.519 N	108° 22' 27.764 W
7,089.4	2.99	354.36	6,800.0	1,764.1	-174.2	382,790.17	668,991.76	39° 59' 59.733 N	108° 22' 28.048 W
7,288.9	0.00	0.00	6,999.4	1,769.3	-174.7	382,791.76	668,991.65	39° 59' 59.785 N	108° 22' 28.055 W
10,489.5	0.00	0.00	10,200.0	1,769.3	-174.7	382,791.76	668,991.65	39° 59' 59.785 N	108° 22' 28.055 W
12,543.5	0.00	0.00	12,254.0	1,769.3	-174.7	382,791.76	668,991.65	39° 59' 59.785 N	108° 22' 28.055 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,515.4	3,400.0	9 5/8" Surf Csg @ 3400' TVD	9.625	17.750	

Well Name: YCF 3-34-0364
 Surface Location: Yellow Creek Federal 3-34-0364 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 0.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 382251.05 669027.40 39° 59' 42.300 N 108° 22' 25.810 W



Project: Sec 3 T1N R98W
 Site: Yellow Creek Federal 3-34-0364 Pad
 Well: YCF 3-34-0364
 Wellbore: Wellbore #1
 Plan: 20° Max, Plan #2 (YCF 3-34-0364/Wellbore #1)



Azimuths to True North
 Magnetic North: 10.76°

Magnetic Field
 Strength: 52694.7nT
 Dip Angle: 66.13°
 Date: 12/31/2009
 Model: IGRF200510

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	936.0	0.00	0.00	936.0	0.0	0.0	0.00	0.00	0.0	
3	1936.0	20.00	354.36	1915.8	171.9	-17.0	2.00	354.36	172.8	
4	5955.6	20.00	354.36	5693.0	1540.1	-152.1	0.00	0.00	1547.5	
5	7288.9	0.00	0.00	6999.4	1769.3	-174.7	1.50	180.00	1777.9	
6	12543.5	0.00	0.00	12254.0	1769.3	-174.7	0.00	0.00	1777.9	

No annotation data is available.