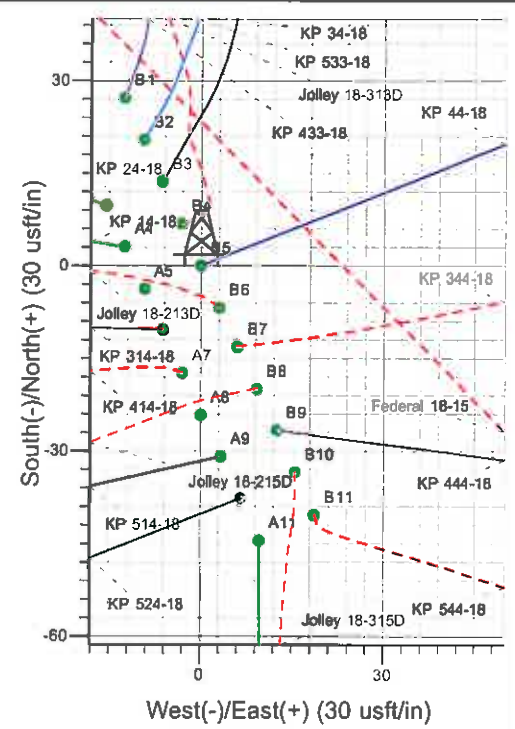
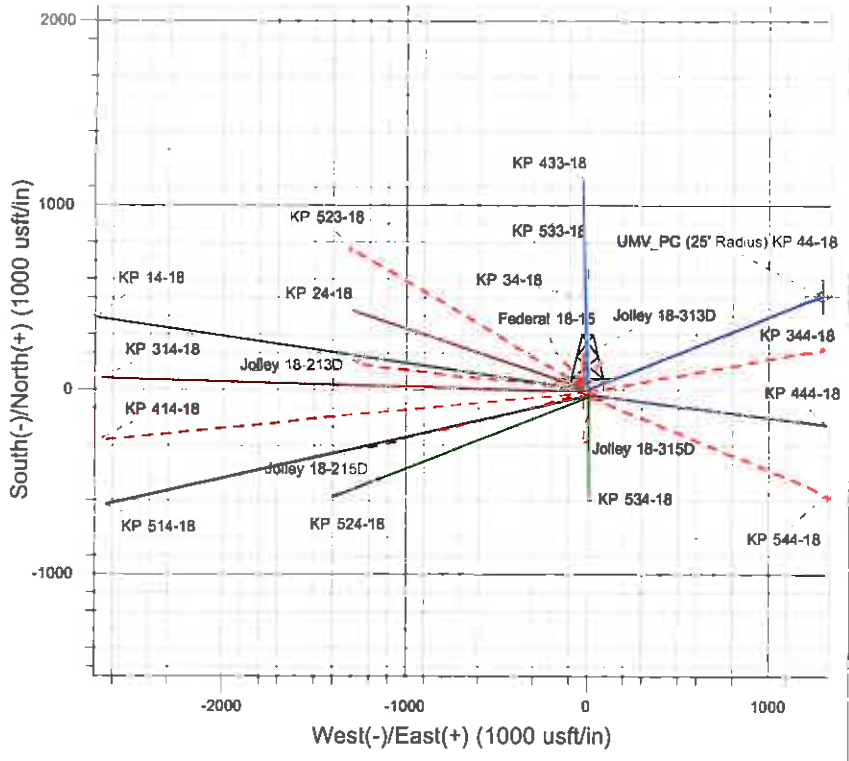
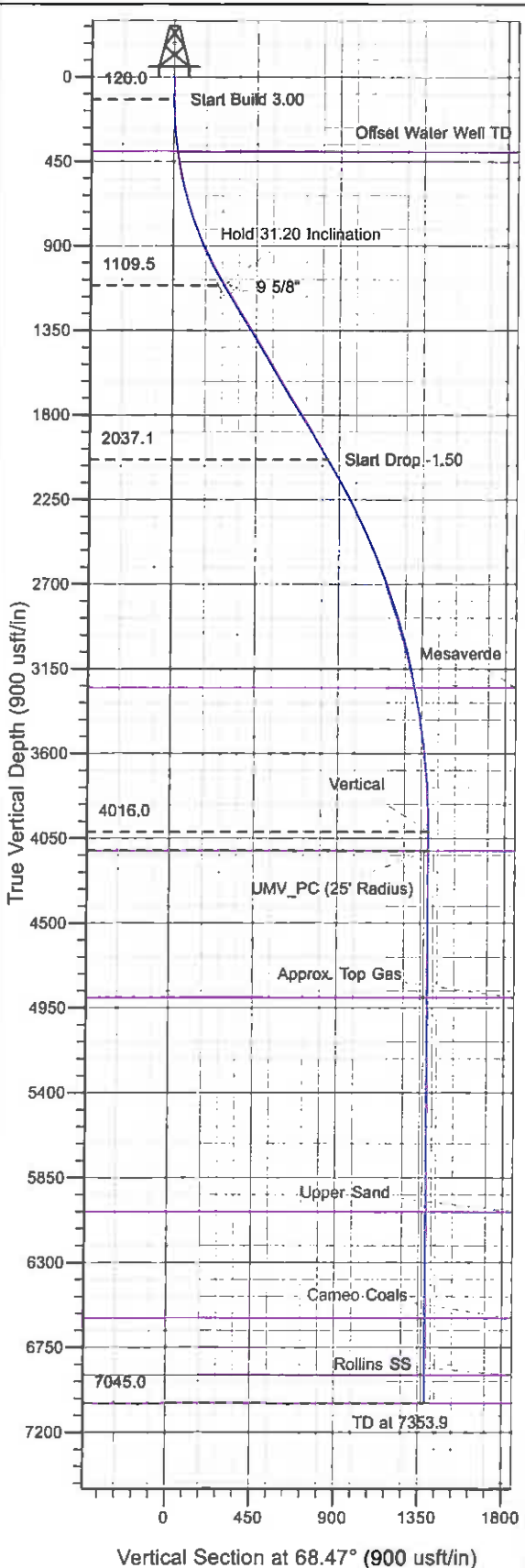




Well Name: KP 44-18  
 Surface Location: KP 34-18 Pad  
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
 Ground Elevation: 5918.0  
 +N/-S 0.0 +E/-W 0.0 Northing 1621927.80 Easting 2409148.20 Latitude 39° 31' 20.174 N Longitude 107° 35' 40.913 W Slot B5  
 KELLY BUSHING @ 5941.0usft (Cyclone 30 (23' RKB) kjs)



Project: Sec. 18-T6S-R91W  
 Site: KP 34-18 Pad  
 Well: KP 44-18  
 Design #1 07Dec09 kjs

**M**  
 Azimuths to True North  
 Magnetic North: 10.35°  
 Magnetic Field  
 Strength: 52498.3snT  
 Dip Angle: 65.89°  
 Date: 12/7/2009  
 Model: IGRF2005-10

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 3.00
1109.5	1160.1	31.20	68.47	101.4	257.0	276.3	276.3	Hold 31.20 Inclination
2037.1	2244.6	31.20	68.47	307.6	779.7	838.2	838.2	Start Drop -1.50
4016.0	4324.9	0.00	0.00	510.4	1293.7	1390.8	1390.8	Vertical
4116.0	4424.9	0.00	0.00	510.4	1293.7	1390.8	1390.8	UMV_PC
7045.0	7353.9	0.00	0.00	510.4	1293.7	1390.8	1390.8	TD at 7353.9

# **KOKOPELLI FIELD**

**Sec. 18-T6S-R91W**

**KP 34-18 Pad**

**KP 44-18 - Slot B5**

**Wellbore #1**

**Plan: Design #1 07Dec09 kjs**

## **Standard Planning Report - Geographic**

**18 March, 2011**

**Williams**  
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 44-18 - Slot B5
Company:	KOKEPELLI FIELD	TVD Reference:	KELLY BUSHING @ 5941.0usft (Cyclone 30 (23' RKB) kjs)
Project:	Sec. 18-T6S-R91W	MD Reference:	KELLY BUSHING @ 5941.0usft (Cyclone 30 (23' RKB) kjs)
Site:	KP 34-18 Pad	North Reference:	True
Well:	KP 44-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 07Dec09 kjs		

Project	Sec. 18-T6S-R91W, Garfield County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	KP 34-18 Pad				
Site Position:		Northing:	1,621,893.85 usft	Latitude:	39° 31' 19.842 N
From:	Map	Easting:	2,409,163.01 usft	Longitude:	107° 35' 40.714 W
Position Uncertainty:	0.0 usft	Slot Radius:	0'	Grid Convergence:	-1.32°

Well	KP 44-18 - Slot B5					
Well Position	+N/-S	0.0 usft	Northing:	1,621,927.80 usft	Latitude:	39° 31' 20.174 N
	+E/-W	0.0 usft	Easting:	2,409,148.20 usft	Longitude:	107° 35' 40.913 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,918.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	12/7/2009	10.35	65.89	52,498

Design	Design #1 07Dec09 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	68.47

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,160.1	31.20	68.47	1,109.5	101.4	257.0	3.00	3.00	0.00	68.47	
2,244.6	31.20	68.47	2,037.1	307.6	779.7	0.00	0.00	0.00	0.00	
4,324.9	0.00	0.00	4,016.0	510.4	1,293.7	1.50	-1.50	0.00	180.00	
4,424.9	0.00	0.00	4,116.0	510.4	1,293.7	0.00	0.00	0.00	0.00	UMV_PC (25' Radius)
7,353.9	0.00	0.00	7,045.0	510.4	1,293.7	0.00	0.00	0.00	0.00	

**Williams**  
Planning Report - Geographic

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Coordinate Reference:</b>	Well! KP 44-18 - Slot B5
<b>Company:</b>	KOKOPELLI FIELD	<b>TVD Reference:</b>	KELLY BUSHING @ 5941.0usf (Cyclone 30 (23' RKB) kjs)
<b>Project:</b>	Sec. 18-T6S-R91W	<b>MD Reference:</b>	KELLY BUSHING @ 5941.0usf (Cyclone 30 (23' RKB) kjs)
<b>Site:</b>	KP 34-18 Pad	<b>North Reference:</b>	True
<b>Well:</b>	KP 44-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 07Dec09 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,621,927.80	2,409,148.20	39° 31' 20.174 N	107° 35' 40.913 W
120.0	0.00	0.00	120.0	0.0	0.0	1,621,927.80	2,409,148.20	39° 31' 20.174 N	107° 35' 40.913 W
<b>Start Build 3.00</b>									
398.0	8.34	68.47	397.0	7.4	18.8	1,621,934.77	2,409,167.15	39° 31' 20.247 N	107° 35' 40.673 W
<b>Offset Water Well TD</b>									
1,160.1	31.20	68.47	1,109.5	101.4	257.0	1,622,023.24	2,409,407.49	39° 31' 21.176 N	107° 35' 37.633 W
<b>Hold 31.20 Inclination</b>									
1,210.0	31.20	68.47	1,152.1	110.9	281.1	1,622,032.16	2,409,431.73	39° 31' 21.270 N	107° 35' 37.327 W
<b>9 5/8"</b>									
2,244.6	31.20	68.47	2,037.1	307.6	779.7	1,622,217.31	2,409,934.74	39° 31' 23.214 N	107° 35' 30.963 W
<b>Start Drop -1.50</b>									
3,553.6	11.57	68.47	3,250.0	481.9	1,221.5	1,622,381.39	2,410,380.49	39° 31' 24.937 N	107° 35' 25.325 W
<b>Mesaverde</b>									
4,324.9	0.00	0.00	4,016.0	510.4	1,293.7	1,622,408.20	2,410,453.30	39° 31' 25.218 N	107° 35' 24.403 W
<b>Vertical</b>									
4,424.9	0.00	0.00	4,116.0	510.4	1,293.7	1,622,408.20	2,410,453.30	39° 31' 25.218 N	107° 35' 24.403 W
<b>UMV_PC - UMV_PC</b>									
5,203.9	0.00	0.00	4,895.0	510.4	1,293.7	1,622,408.20	2,410,453.30	39° 31' 25.218 N	107° 35' 24.403 W
<b>Approx. Top Gas</b>									
6,338.9	0.00	0.00	6,030.0	510.4	1,293.7	1,622,408.20	2,410,453.30	39° 31' 25.218 N	107° 35' 24.403 W
<b>Upper Sand</b>									
6,902.9	0.00	0.00	6,594.0	510.4	1,293.7	1,622,408.20	2,410,453.30	39° 31' 25.218 N	107° 35' 24.403 W
<b>Cameo Coals</b>									
7,203.9	0.00	0.00	6,895.0	510.4	1,293.7	1,622,408.20	2,410,453.30	39° 31' 25.218 N	107° 35' 24.403 W
<b>Rollins SS</b>									
7,353.9	0.00	0.00	7,045.0	510.4	1,293.7	1,622,408.20	2,410,453.30	39° 31' 25.218 N	107° 35' 24.403 W
<b>TD at 7353.9 - TD</b>									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
UMV_PC (25' Radius) K - hit/miss target - Shape - plan hits target center - Circle (radius 25.0)	0.00	0.00	4,116.0	510.4	1,293.7	1,622,408.20	2,410,453.30	39° 31' 25.218 N	107° 35' 24.403 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,210.0	1,152.1	9 5/8"	9-5/8	12-1/4	

**Williams**  
 Planning Report - Geographic

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Co-ordinate Reference:</b>	Well KP 44-18 - Slot B5
<b>Company:</b>	KOKOPELLI FIELD	<b>TVD Reference:</b>	KELLY BUSHING @ 5941.0usft (Cyclone 30 (23' RKB) kjs)
<b>Project:</b>	Sec. 18-T6S-R91W	<b>MD Reference:</b>	KELLY BUSHING @ 5941.0usft (Cyclone 30 (23' RKB) kjs)
<b>Site:</b>	KP 34-18 Pad	<b>North Reference:</b>	True
<b>Well:</b>	KP 44-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 07Dec09 kjs		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")
398.0	397.0	Offset Water Well TD			
3,553.6	3,250.0	Mesaverde			
4,424.9	4,116.0	UMV_PC			
5,203.9	4,895.0	Approx. Top Gas			
6,338.9	6,030.0	Upper Sand			
6,902.9	6,594.0	Cameo Coals			
7,203.9	6,895.0	Rollins SS			
7,353.9	7,045.0	TD			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
120.0	120.0	0.0	0.0	Start Build 3.00
1,160.1	1,109.5	101.4	257.0	Hold 31.20 Inclination
2,244.6	2,037.1	307.6	779.7	Start Drop -1.50
4,324.9	4,016.0	510.4	1,293.7	Vertical
4,424.9	4,116.0	510.4	1,293.7	UMV_PC
7,353.9	7,045.0	510.4	1,293.7	TD at 7353.9