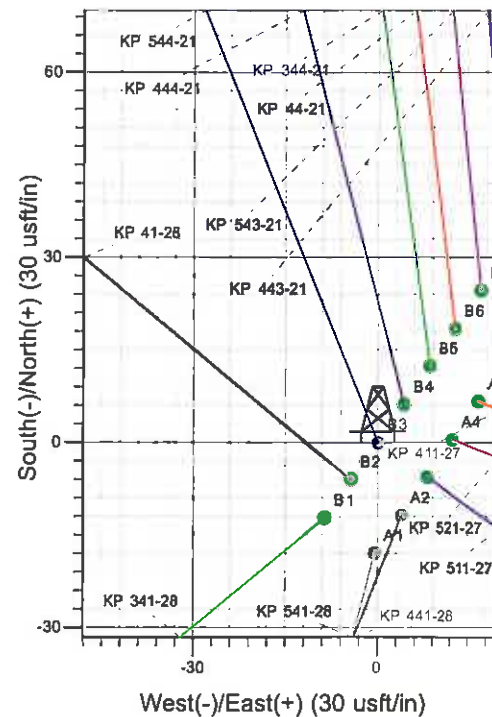
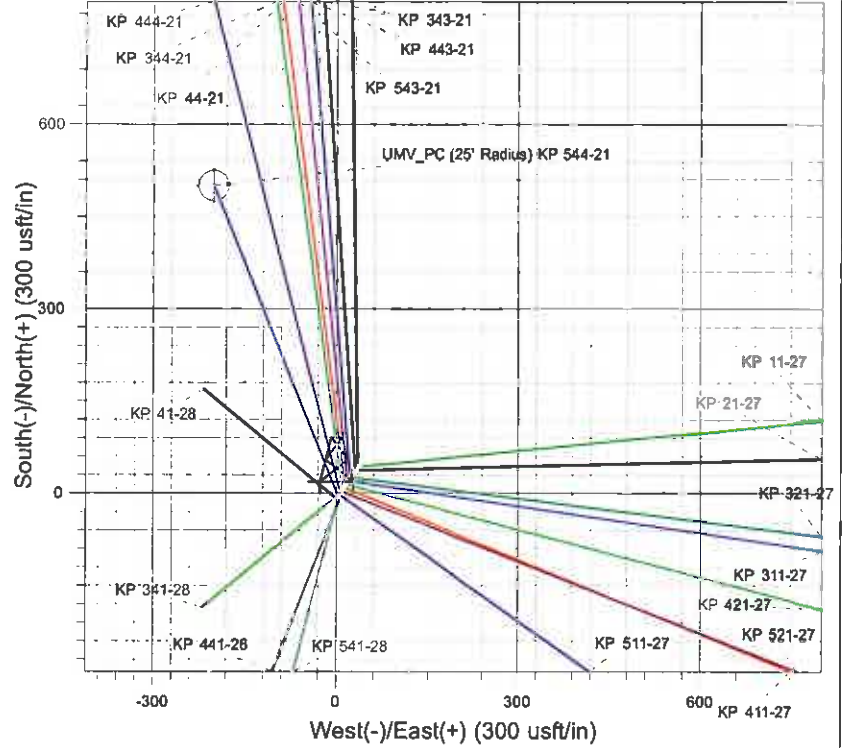
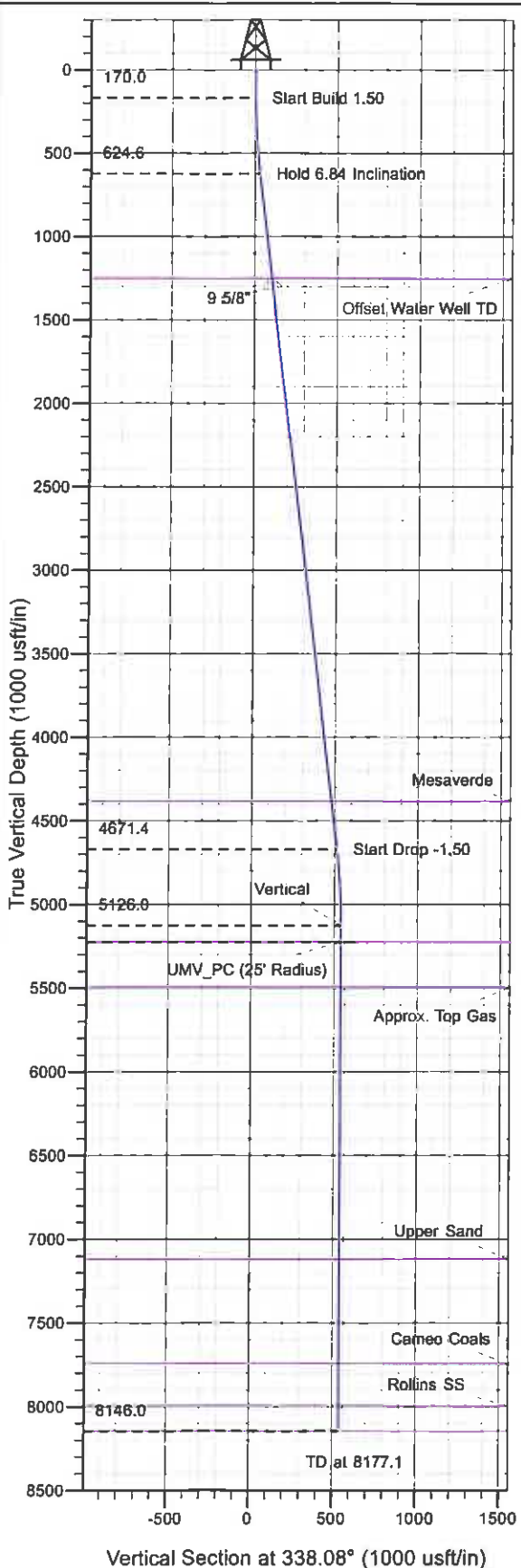




Well Name: KP 544-21  
 Surface Location: KP 41-28 Pad  
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
 Ground Elevation: 7056.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1615584.30 2421172.60 39° 30' 20.206 N 107° 33' 5.673 W B3  
 KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)



Project: Sec. 28-T6S-R91W  
 Site: KP 41-28 Pad  
 Well: KP 544-21  
 Design # 1 31Jan11 kjs

Azimuths to True North  
 Magnetic North: 10.20°  
 Magnetic Field  
 Strength: 52342.0snT  
 Dip Angle: 65.84°  
 Date: 1/31/2011  
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
170.0	170.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 1.50
624.6	625.7	6.84	338.08	25.2	-10.1	27.1	27.1	Hold 6.84 Inclination
4671.4	4701.4	6.84	338.08	475.2	-191.2	512.2	512.2	Start Drop -1.50
5126.0	5157.1	0.00	0.00	500.4	-201.4	539.4	539.4	Vertical
5226.0	5257.1	0.00	0.00	500.4	-201.4	539.4	539.4	UMV_PC
8146.0	8177.1	0.00	0.00	500.4	-201.4	539.4	539.4	TD at 8177.1

# **KOKOPELLI FIELD**

**Sec. 28-T6S-R91W**

**KP 41-28 Pad**

**KP 544-21 - Slot B3**

**Wellbore #1**

**Plan: Design #1 31Jan11 kjs**

## **Standard Planning Report - Geographic**

**01 April, 2011**

**Williams**  
Planning Report - Geographic

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Co-ordinate Reference:</b>	Well KP 544-21 - Slot B3
<b>Company:</b>	KOKEPELLI FIELD	<b>TVD Reference:</b>	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
<b>Project:</b>	Sec. 28-T6S-R91W	<b>MD Reference:</b>	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
<b>Site:</b>	KP 41-28 Pad	<b>North Reference:</b>	True
<b>Well:</b>	KP 544-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 31Jan11 kjs		

<b>Project</b>	Sec. 28-T6S-R91W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

<b>Site</b>	KP 41-28 Pad				
<b>Site Position:</b>	<b>Northing:</b>	1,615,566.30 usft	<b>Latitude:</b>	39° 30' 20.028 N	
<b>From:</b> Map	<b>Eastng:</b>	2,421,171.70 usft	<b>Longitude:</b>	107° 33' 5.679 W	
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13.200 In	<b>Grid Convergence:</b>	-1.294 °

<b>Well</b>	KP 544-21 - Slot B3			
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	1,615,584.30 usft
	<b>+E/-W</b>	0.0 usft	<b>Eastng:</b>	2,421,172.60 usft
<b>Position Uncertainty</b>	0.0 usft		<b>Wellhead Elevation:</b>	<b>Ground Level:</b>
				7,056.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	1/31/2011	10.200	65.840	52,342

<b>Design</b>	Design #1 31Jan11 kjs			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	338.08

<b>Plan Sections</b>										
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	0.000	
170.0	0.00	0.00	170.0	0.0	0.0	0.00	0.00	0.00	0.000	
625.7	6.84	338.08	624.6	25.2	-10.1	1.50	1.50	0.00	338.080	
4,701.4	6.84	338.08	4,671.4	475.2	-191.2	0.00	0.00	0.00	0.000	
5,157.1	0.00	0.00	5,126.0	500.4	-201.4	1.50	-1.50	0.00	180.000	
5,257.1	0.00	0.00	5,226.0	500.4	-201.4	0.00	0.00	0.00	0.000	UMV_PC (25' Radius)
8,177.1	0.00	0.00	8,146.0	500.4	-201.4	0.00	0.00	0.00	0.000	

**Williams**  
Planning Report - Geographic

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Co-ordinate Reference:</b>	Well KP 544-21 - Slot B3
<b>Company:</b>	KOKOPELLI FIELD	<b>TVD Reference:</b>	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
<b>Project:</b>	Sec. 28-T6S-R91W	<b>MD Reference:</b>	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
<b>Site:</b>	KP 41-28 Pad	<b>North Reference:</b>	True
<b>Well:</b>	KP 544-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 31Jan11 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	1,615,584.30	2,421,172.60	39° 30' 20.206 N	107° 33' 5.673 W
170.0	0.00	0.00	170.0	0.0	0.0	1,615,584.30	2,421,172.60	39° 30' 20.206 N	107° 33' 5.673 W
<b>Start Build 1.50</b>									
625.7	6.84	338.08	624.6	25.2	-10.1	1,615,609.70	2,421,163.04	39° 30' 20.455 N	107° 33' 5.802 W
<b>Hold 6.84 Inclination</b>									
1,256.6	6.84	338.08	1,251.0	94.8	-38.2	1,615,679.98	2,421,136.59	39° 30' 21.143 N	107° 33' 6.160 W
<b>Offset Water Well TD</b>									
1,317.0	6.84	338.08	1,311.0	101.5	-40.8	1,615,686.71	2,421,134.06	39° 30' 21.209 N	107° 33' 6.194 W
<b>9 5/8"</b>									
4,410.0	6.84	338.08	4,382.0	443.0	-178.3	1,616,031.22	2,421,004.39	39° 30' 24.585 N	107° 33' 7.948 W
<b>Mesaverde</b>									
4,701.4	6.84	338.08	4,671.4	475.2	-191.2	1,616,063.69	2,420,992.17	39° 30' 24.903 N	107° 33' 8.113 W
<b>Start Drop -1.50</b>									
5,157.1	0.00	0.00	5,126.0	500.4	-201.4	1,616,089.10	2,420,982.60	39° 30' 25.152 N	107° 33' 8.242 W
<b>Vertical</b>									
5,257.1	0.00	0.00	5,226.0	500.4	-201.4	1,616,089.10	2,420,982.60	39° 30' 25.152 N	107° 33' 8.242 W
<b>UMV_PC - UMV_PC</b>									
5,527.1	0.00	0.00	5,496.0	500.4	-201.4	1,616,089.10	2,420,982.60	39° 30' 25.152 N	107° 33' 8.242 W
<b>Approx. Top Gas</b>									
7,153.1	0.00	0.00	7,122.0	500.4	-201.4	1,616,089.10	2,420,982.60	39° 30' 25.152 N	107° 33' 8.242 W
<b>Upper Sand</b>									
7,778.1	0.00	0.00	7,747.0	500.4	-201.4	1,616,089.10	2,420,982.60	39° 30' 25.152 N	107° 33' 8.242 W
<b>Cameo Coals</b>									
8,027.1	0.00	0.00	7,996.0	500.4	-201.4	1,616,089.10	2,420,982.60	39° 30' 25.152 N	107° 33' 8.242 W
<b>Rollins SS</b>									
8,177.1	0.00	0.00	8,146.0	500.4	-201.4	1,616,089.10	2,420,982.60	39° 30' 25.152 N	107° 33' 8.242 W
<b>TD at 8177.1 - 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	0.00	0.00	5,226.0	500.4	-201.4	1,616,089.10	2,420,982.60	39° 30' 25.152 N	107° 33' 8.242 W
- hit/miss target									
- Shape									
- plan hits target center									
- Circle (radius 25.0)									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,317.0	1,311.0	9 5/8"	9.625	12.250

**Williams**  
**Planning Report - Geographic**

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Co-ordinate Reference:</b>	Well KP 544-21 - Slot B3
<b>Company:</b>	KOKOPELLI FIELD	<b>TVD Reference:</b>	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
<b>Project:</b>	Sec. 28-T6S-R91W	<b>MD Reference:</b>	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
<b>Site:</b>	KP 41-28 Pad	<b>North Reference:</b>	True
<b>Well:</b>	KP 544-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 31Jan11 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,256.6	1,251.0	Offset Water Well TD				
4,410.0	4,362.0	Mesaverde				
5,257.1	5,226.0	UMV_PC				
5,527.1	5,496.0	Approx. Top Gas				
7,153.1	7,122.0	Upper Sand				
7,778.1	7,747.0	Cameo Coals				
8,027.1	7,996.0	Rollins SS				
8,177.1	8,146.0	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
170.0	170.0	0.0	0.0	Start Build 1.50	
625.7	624.6	25.2	-10.1	Hold 6.84 Inclination	
4,701.4	4,671.4	475.2	-191.2	Start Drop -1.50	
5,157.1	5,126.0	500.4	-201.4	Vertical	
5,257.1	5,226.0	500.4	-201.4	UMV_PC	
8,177.1	8,146.0	500.4	-201.4	TD at 8177.1	