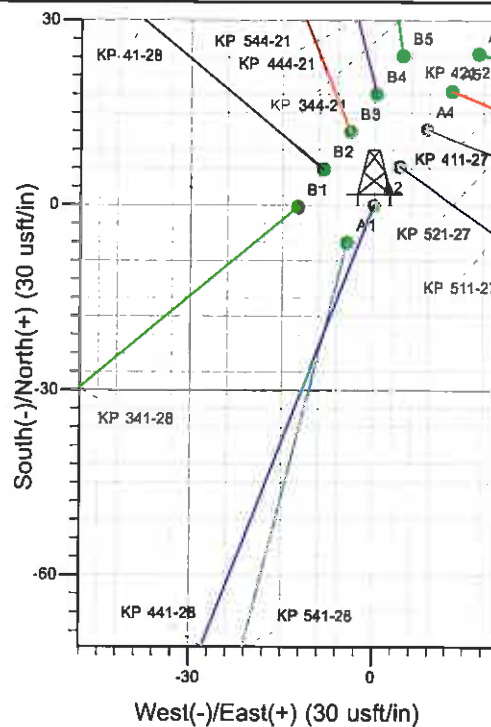
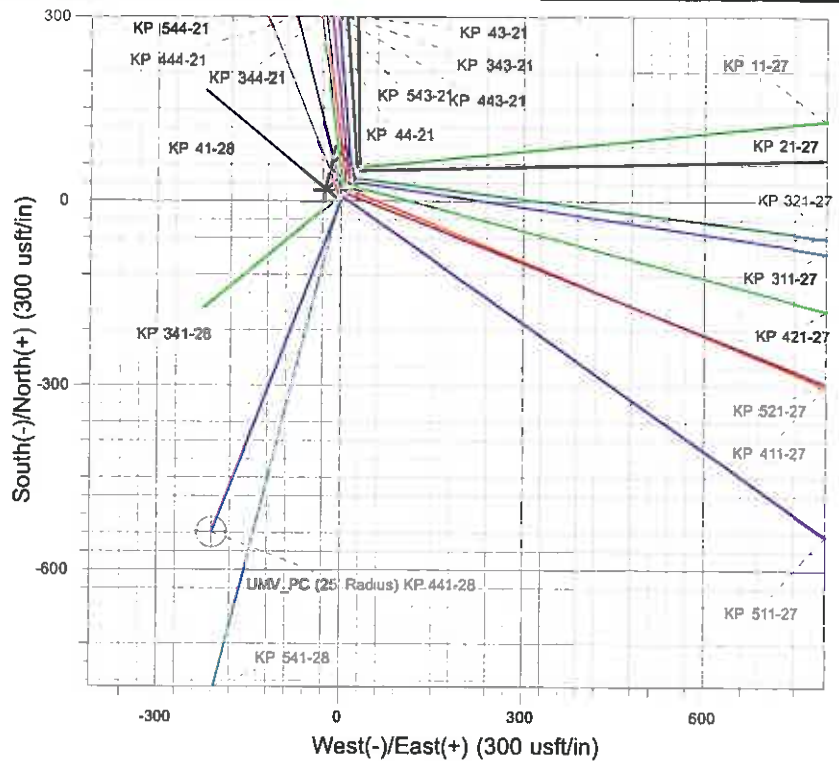
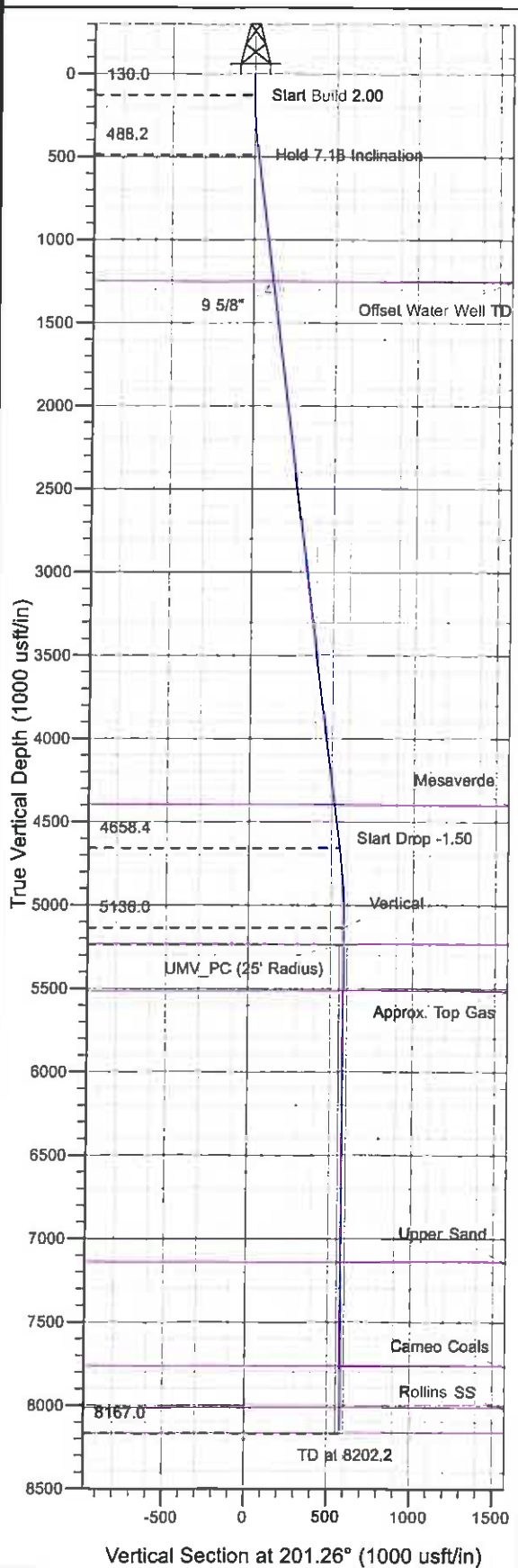




Well Name: KP 441-28  
 Surface Location: KP 41-28 Pad  
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
 Ground Elevation: 7056.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1615572.30 2421176.20 39° 30' 20.088 N 107° 33' 5.624 W A2  
 KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)



Project: Sec. 28-T6S-R91W  
 Site: KP 41-28 Pad  
 Well: KP 441-28  
 Design #1 31Jan11 kjs



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

#### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSed	Departure	Annotation
130.0	130.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00
488.2	489.1	7.18	201.26	-21.0	-8.2	22.5	22.5	Hold 7.18 Inclination
4658.4	4692.3	7.18	201.26	-510.7	-198.7	548.0	548.0	Start Drop -1.50
5136.0	5171.2	0.00	0.00	-538.7	-209.6	578.0	578.0	Vertical
5236.0	5271.2	0.00	0.00	-538.7	-209.6	578.0	578.0	UMV_PC
8167.0	8202.2	0.00	0.00	-538.7	-209.6	578.0	578.0	TD at 8202.2

# **KOKOPELLI FIELD**

**Sec. 28-T6S-R91W**

**KP 41-28 Pad**

**KP 441-28 - Slot A2**

**Wellbore #1**

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

## **Standard Planning Report - Geographic**

**01 April, 2011**

**Williams**  
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 441-28 - Slot A2
Company:	KOKOPELLI FIELD	TVD Reference:	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
Project:	Sec. 28-T6S-R91W	MD Reference:	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
Site:	KP 41-28 Pad	North Reference:	True
Well:	KP 441-28	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 31Jan11 kjs		

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

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

Well	KP 441-28 - Slot A2		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level:
			7,056.0 usft

Wellbore	Wellbore #1		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/31/2011	10.200	65.640	52,342

Design	Design #1 31Jan11 kjs		
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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	201.26

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	0.000	
130.0	0.00	0.00	130.0	0.0	0.0	0.00	0.00	0.00	0.000	
489.1	7.18	201.26	488.2	-21.0	-8.2	2.00	2.00	0.00	201.260	
4,692.3	7.18	201.26	4,658.4	-510.7	-198.7	0.00	0.00	0.00	0.000	
5,171.2	0.00	0.00	5,136.0	-538.7	-209.6	1.50	-1.50	0.00	180.000	
5,271.2	0.00	0.00	5,236.0	-538.7	-209.6	0.00	0.00	0.00	0.000	UMV_PC (25' Radius)
8,202.2	0.00	0.00	8,167.0	-538.7	-209.6	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 441-28 - Slot A2
<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 441-28	<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	1,615,572.30	2,421,176.20	39° 30' 20.088 N	107° 33' 5.624 W
130.0	0.00	0.00	130.0	0.0	0.0	1,615,572.30	2,421,176.20	39° 30' 20.088 N	107° 33' 5.624 W
<b>Start Build 2.00</b>									
489.1	7.18	201.26	488.2	-21.0	-8.2	1,615,551.53	2,421,167.58	39° 30' 19.881 N	107° 33' 5.728 W
<b>Hold 7.18 Inclination</b>									
1,258.0	7.18	201.26	1,251.0	-110.5	-43.0	1,615,462.75	2,421,130.71	39° 30' 18.996 N	107° 33' 6.172 W
<b>Offset Water Well TD</b>									
1,318.4	7.18	201.26	1,311.0	-117.6	-45.8	1,615,455.77	2,421,127.81	39° 30' 18.926 N	107° 33' 6.207 W
<b>9 5/8"</b>									
4,431.9	7.18	201.26	4,400.0	-480.4	-186.9	1,615,096.25	2,420,978.49	39° 30' 15.340 N	107° 33' 8.008 W
<b>Mesaverde</b>									
4,692.3	7.18	201.26	4,658.4	-510.7	-198.7	1,615,066.18	2,420,966.00	39° 30' 15.040 N	107° 33' 8.159 W
<b>Start Drop -1.50</b>									
5,171.2	0.00	0.00	5,136.0	-538.7	-209.6	1,615,038.50	2,420,954.50	39° 30' 14.764 N	107° 33' 8.298 W
<b>Vertical</b>									
5,271.2	0.00	0.00	5,236.0	-538.7	-209.6	1,615,038.50	2,420,954.50	39° 30' 14.764 N	107° 33' 8.298 W
<b>UMV_PC - UMV_PC</b>									
5,552.2	0.00	0.00	5,517.0	-538.7	-209.6	1,615,038.50	2,420,954.50	39° 30' 14.764 N	107° 33' 8.298 W
<b>Approx. Top Gas</b>									
7,179.2	0.00	0.00	7,144.0	-538.7	-209.6	1,615,038.50	2,420,954.50	39° 30' 14.764 N	107° 33' 8.298 W
<b>Upper Sand</b>									
7,802.2	0.00	0.00	7,767.0	-538.7	-209.6	1,615,038.50	2,420,954.50	39° 30' 14.764 N	107° 33' 8.298 W
<b>Cameo Coals</b>									
8,052.2	0.00	0.00	8,017.0	-538.7	-209.6	1,615,038.50	2,420,954.50	39° 30' 14.764 N	107° 33' 8.298 W
<b>Rollins SS</b>									
8,202.2	0.00	0.00	8,167.0	-538.7	-209.6	1,615,038.50	2,420,954.50	39° 30' 14.764 N	107° 33' 8.298 W
<b>TD at 8202.2 - TD</b>									

**Design Targets**

Target Name - hit/miss target - Shape	Dip Angle (")	Dip Dir. (")	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
UMV_PC (25' Radius) K - plan hits target center - Circle (radius 25.0)	0.00	0.00	5,236.0	-538.7	-209.6	1,615,038.50	2,420,954.50	39° 30' 14.764 N	107° 33' 8.298 W

**Casing Points**

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,318.4	1,311.0	9 5/8"	9.625	12.250

**Williams**  
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 441-28 - Slot A2
Company:	KOKOPELLI FIELD	TVD Reference:	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
Project:	Sec. 28-T6S-R91W	MD Reference:	KELLY BUSHING @ 7079.0usft (Cyclone 30 (23' RKB) kjs)
Site:	KP 41-28 Pad	North Reference:	True
Well:	KP 441-28	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 31Jan11 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,258.0	1,251.0	Offset Water Well TD				
4,431.9	4,400.0	Mesaverde				
5,271.2	5,236.0	UMV_PC				
5,552.2	5,517.0	Approx. Top Gas				
7,179.2	7,144.0	Upper Sand				
7,802.2	7,767.0	Cameo Coals				
8,052.2	8,017.0	Rollins SS				
8,202.2	8,167.0	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
130.0	130.0	0.0	0.0	Start Build 2.00	
489.1	488.2	-21.0	-8.2	Hold 7.18 Inclination	
4,692.3	4,658.4	-510.7	-198.7	Start Drop -1.50	
5,171.2	5,136.0	-538.7	-209.6	Vertical	
5,271.2	5,236.0	-538.7	-209.6	UMV_PC	
8,202.2	8,167.0	-538.7	-209.6	TD at 8202.2	