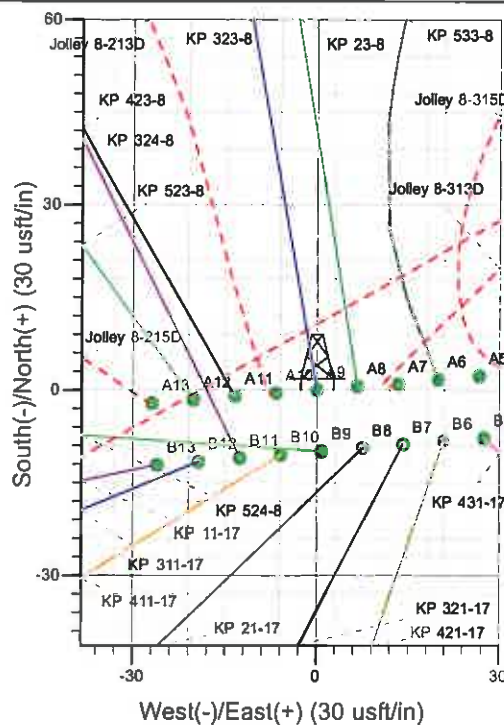
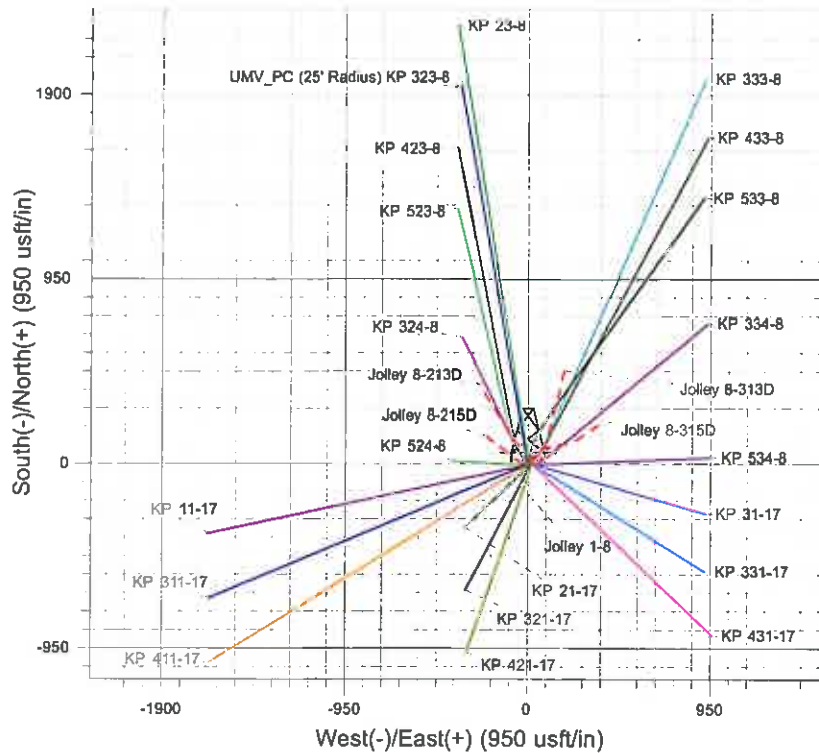
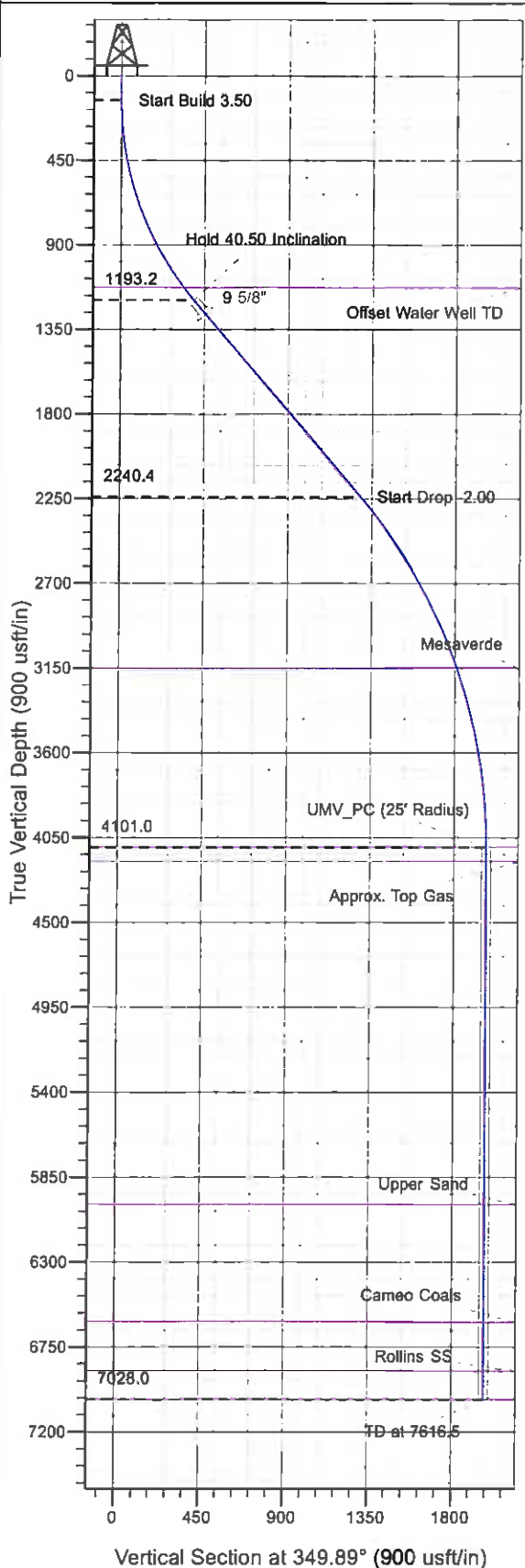




Well Name: KP 323-8  
 Surface Location: KP 24-8 Pad  
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
 Ground Elevation: 6526.0  
 +N/-S 0.0 +E/-W 0.0 Northing 1626661.80 Easting 2413462.70 Latitude 39° 32' 7.930 N Longitude 107° 34' 47.250 W Slot A9  
 KELLY BUSHING @ 6548.0usft (Cyclone 17 (22" RKB) kjs)



Project: Sec. 08-T6S-R91W  
 Site: KP 24-8 Pad  
 Well: KP 323-8  
 Design #1 04May11 kjs

Azimuths to True North  
 Magnetic North: 10.16°  
 Magnetic Field  
 Strength: 52365.0nT  
 Dip Angle: 65.86°  
 Date: 5/3/2011  
 Model: IGRF200510

#### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
130.0	130.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 3.50
1193.2	1287.2	40.50	349.89	386.2	-68.8	392.3	392.3	Hold 40.50 Inclination
2240.4	2664.4	40.50	349.89	1266.7	-225.8	1286.7	1286.7	Start Drop -2.00
4101.0	4689.5	0.00	0.00	1942.6	-346.3	1973.2	1973.2	UMV_PC
7028.0	7616.5	0.00	0.00	1942.6	-346.3	1973.2	1973.2	TD at 7616.5

# **KOKOPELLI FIELD**

**Sec. 08-T6S-R91W**

**KP 24-8 Pad**

**KP 323-8 - Slot A9**

**Wellbore #1**

**Plan: Design #1 04May11 kjs**

## **Standard Planning Report - Geographic**

**22 June, 2011**

**Williams**  
Planning Report - Geographic

<b>Database:</b>	Compass R5000 WIN AUTH	<b>Local Co-ordinate Reference:</b>	Well KP 323-8 - Slot A9
<b>Company:</b>	KOKOPELLI FIELD	<b>TVD Reference:</b>	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
<b>Project:</b>	Sec. 08-T6S-R91W	<b>MD Reference:</b>	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
<b>Site:</b>	KP 24-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	KP 323-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 04May11 kjs		

<b>Project</b>	Sec. 08-T6S-R91W, Garfield County, CO		
<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		Using geodetic scale factor

<b>Site</b>	KP 24-8 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,626,664.90 usft	<b>Latitude:</b> 39° 32' 7.973 N
<b>From:</b>	Map	<b>Easting:</b>	2,413,516.10 usft	<b>Longitude:</b> 107° 34' 46.570 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.312 °

<b>Well</b>	KP 323-8 - Slot A9			
<b>Well Position</b>	+N/-S	0.0 usft	<b>Northing:</b> 1,626,661.80 usft	<b>Latitude:</b> 39° 32' 7.930 N
	+E/-W	0.0 usft	<b>Easting:</b> 2,413,462.70 usft	<b>Longitude:</b> 107° 34' 47.250 W
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b> 6,526.0 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>
	IGRF200510	5/3/2011	10.156	65.865	52,365

<b>Design</b>	Design #1 04May11 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	349.89

<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	
130.0	0.00	0.00	130.0	0.0	0.0	0.00	0.00	0.00	0.000	
1,287.2	40.50	349.89	1,193.2	386.2	-68.8	3.50	3.50	0.00	349.893	
2,664.4	40.50	349.89	2,240.4	1,266.7	-225.8	0.00	0.00	0.00	0.000	
4,689.5	0.00	0.00	4,101.0	1,942.6	-346.3	2.00	-2.00	0.00	180.000	UMV_PC (25' Radius)
7,616.5	0.00	0.00	7,028.0	1,942.6	-346.3	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 323-8 - Slot A9
<b>Company:</b>	KOKOPELLI FIELD	<b>TVD Reference:</b>	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
<b>Project:</b>	Sec. 08-T6S-R91W	<b>MD Reference:</b>	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
<b>Site:</b>	KP 24-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	KP 323-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 04May11 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	1,626,661.80	2,413,462.70	39° 32' 7.930 N	107° 34' 47.250 W
130.0	0.00	0.00	130.0	0.0	0.0	1,626,661.80	2,413,462.70	39° 32' 7.930 N	107° 34' 47.250 W
<b>Start Build 3.50</b>									
1,204.5	37.61	349.89	1,129.0	334.9	-59.7	1,626,997.95	2,413,410.69	39° 32' 11.240 N	107° 34' 48.012 W
<b>Offset Water Well TD</b>									
1,287.2	40.50	349.89	1,193.2	386.2	-66.8	1,627,049.44	2,413,402.73	39° 32' 11.747 N	107° 34' 48.129 W
<b>Hold 40.50 Inclination</b>									
1,387.0	40.50	349.89	1,269.1	450.0	-80.2	1,627,113.48	2,413,392.82	39° 32' 12.377 N	107° 34' 48.274 W
<b>9 5/8"</b>									
2,664.4	40.50	349.89	2,240.4	1,266.7	-225.8	1,627,933.32	2,413,265.97	39° 32' 20.449 N	107° 34' 50.133 W
<b>Start Drop -2.00</b>									
3,723.3	19.32	349.89	3,153.0	1,783.7	-317.9	1,628,452.20	2,413,185.68	39° 32' 25.558 N	107° 34' 51.309 W
<b>Mesaverde</b>									
4,689.5	0.00	0.00	4,101.0	1,942.6	-346.3	1,628,611.70	2,413,161.00	39° 32' 27.128 N	107° 34' 51.670 W
<b>UMV_PC - UMV_PC</b>									
4,766.5	0.00	0.00	4,178.0	1,942.6	-346.3	1,628,611.70	2,413,161.00	39° 32' 27.128 N	107° 34' 51.670 W
<b>Approx. Top Gas</b>									
6,583.5	0.00	0.00	5,995.0	1,942.6	-346.3	1,628,611.70	2,413,161.00	39° 32' 27.128 N	107° 34' 51.670 W
<b>Upper Sand</b>									
7,207.5	0.00	0.00	6,619.0	1,942.6	-346.3	1,628,611.70	2,413,161.00	39° 32' 27.128 N	107° 34' 51.670 W
<b>Cameo Coals</b>									
7,466.5	0.00	0.00	6,878.0	1,942.6	-346.3	1,628,611.70	2,413,161.00	39° 32' 27.128 N	107° 34' 51.670 W
<b>Rollins SS</b>									
7,616.5	0.00	0.00	7,028.0	1,942.6	-346.3	1,628,611.70	2,413,161.00	39° 32' 27.128 N	107° 34' 51.670 W
<b>TD at 7616.5 - TD</b>									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
UMV_PC (25' Radius) K	0.00	0.00	4,101.0	1,942.6	-346.3	1,628,611.70	2,413,161.00	39° 32' 27.128 N	107° 34' 51.670 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,387.0	1,269.1	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 323-8 - Slot A9
<b>Company:</b>	KOKOPELLI FIELD	<b>TVD Reference:</b>	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
<b>Project:</b>	Sec 08-T6S-R91W	<b>MD Reference:</b>	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
<b>Site:</b>	KP 24-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	KP 323-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 04May11 kjs		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")
1,204.5	1,129.0	Offset Water Well TD			
3,723.3	3,153.0	Mesaverde			
4,689.5	4,101.0	UMV_PC			
4,766.5	4,178.0	Approx. Top Gas			
6,583.5	5,995.0	Upper Sand			
7,207.5	6,619.0	Cameo Coals			
7,466.5	6,878.0	Rollins SS			
7,616.5	7,028.0	TD			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
130.0	130.0	0.0	0.0	Start Build 3.50
1,287.2	1,193.2	386.2	-68.8	Hold 40.50 Inclination
2,664.4	2,240.4	1,266.7	-225.8	Start Drop -2.00
4,689.5	4,101.0	1,942.6	-346.3	UMV_PC
7,616.5	7,028.0	1,942.6	-346.3	TD at 7616.5