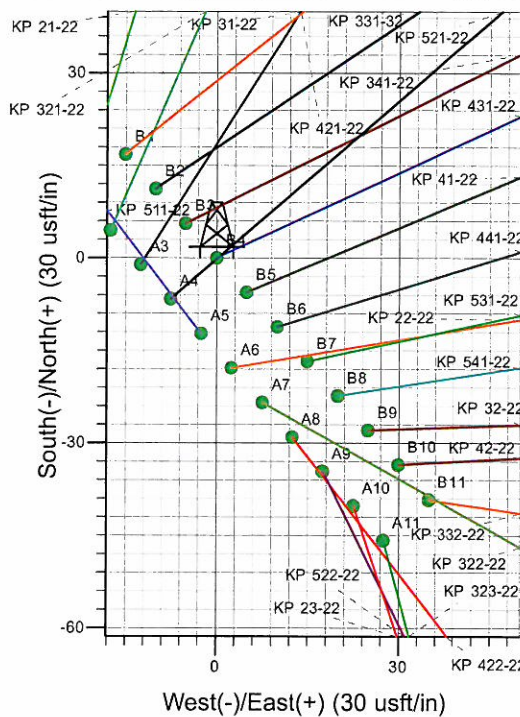
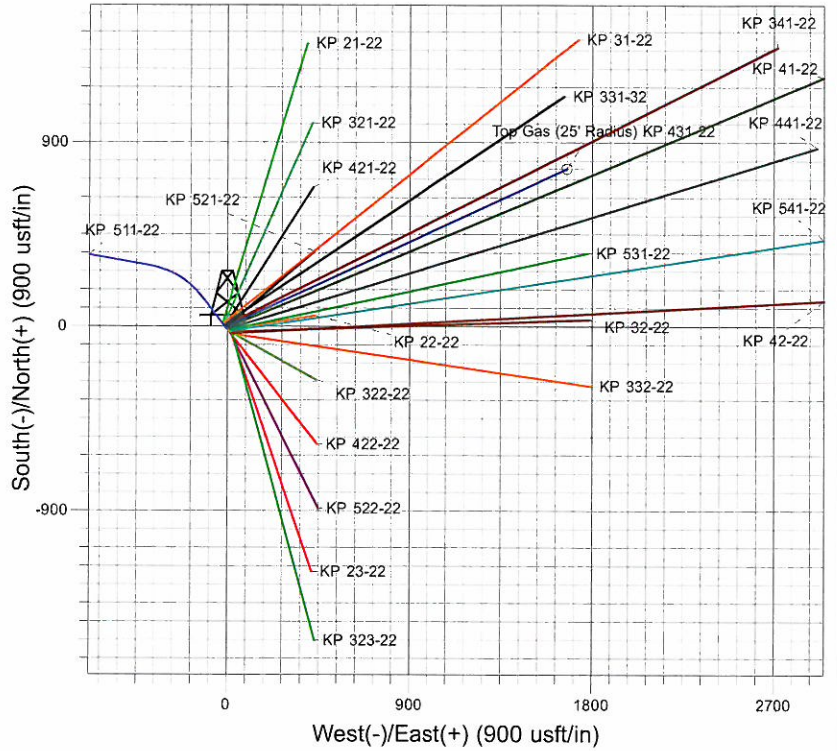
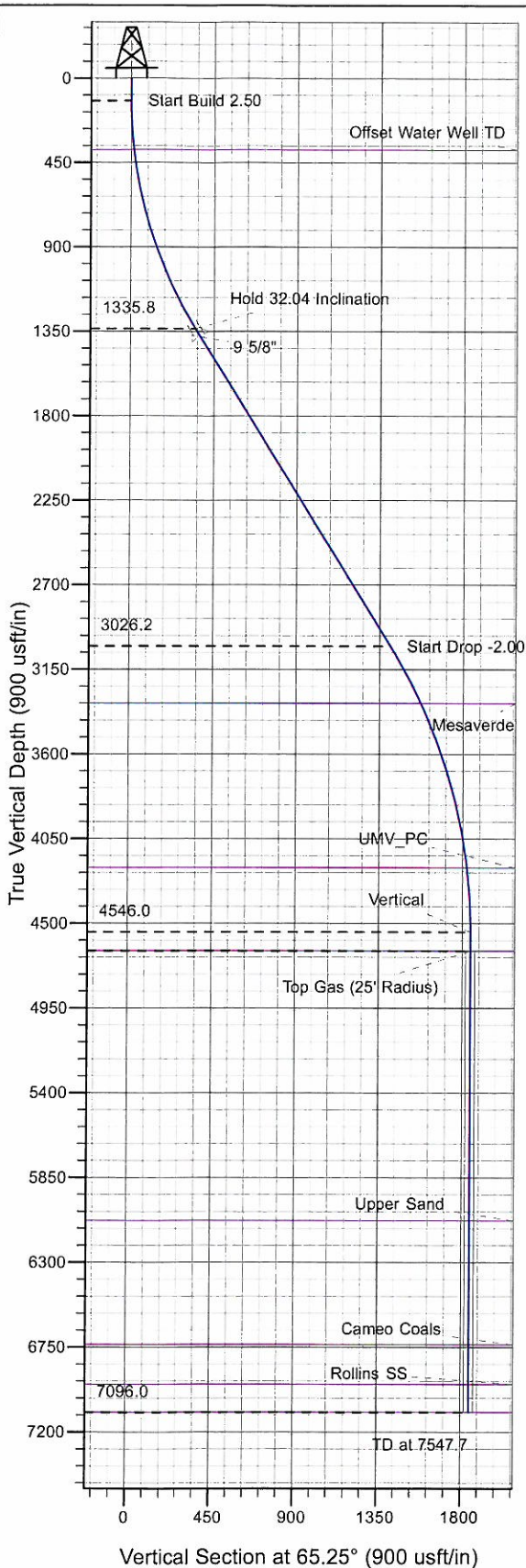




Well Name: KP 431-22
 Surface Location: KP 22-22 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 6186.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1619576.90 2423275.10 39° 31' 0.126 N 107° 32' 40.001 W B4
 WELL @ 6209.0usft (Original Well Elev)



Project: Sec. 22-T6S-R91W
 Site: KP 22-22 Pad
 Well: KP 431-22
 Design #1 17Nov10 kjs

Azimuths to True North
 Magnetic North: 10.20°
 Magnetic Field
 Strength: 52406.8nT
 Dip Angle: 65.87°
 Date: 11/17/2010
 Model: IGRF200510

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 2.50
1335.8	1401.6	32.04	65.25	146.2	317.0	349.1	349.1	Hold 32.04 Inclination
3026.2	3395.7	32.04	65.25	589.1	1277.7	1407.0	1407.0	Start Drop -2.00
4546.0	4997.7	0.00	0.00	771.9	1674.0	1843.3	1843.3	Vertical
4646.0	5097.7	0.00	0.00	771.9	1674.0	1843.3	1843.3	Top Gas
7096.0	7547.7	0.00	0.00	771.9	1674.0	1843.3	1843.3	TD at 7547.7

KOKOPELLI FIELD

Sec. 22-T6S-R91W

KP 22-22 Pad

KP 431-22 - Slot B4

Wellbore #1

Plan: Design #1 17Nov10 kjs

Standard Planning Report - Geographic

01 December, 2010

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 431-22 - Slot B4
Company:	KOKOPELLI FIELD	TVD Reference:	WELL @ 6209.0usft (Original Well Elev)
Project:	Sec. 22-T6S-R91W	MD Reference:	WELL @ 6209.0usft (Original Well Elev)
Site:	KP 22-22 Pad	North Reference:	True
Well:	KP 431-22	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 17Nov10 kjs		

Project	Sec. 22-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		

Site	KP 22-22 Pad		
Site Position:		Northing:	1,619,530.50 usft
From:	Map	Easting:	2,423,301.50 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in
		Latitude:	39° 30' 59.673 N
		Longitude:	107° 32' 39.651 W
		Grid Convergence:	-1.289 °

Well	KP 431-22 - Slot B4		
Well Position	+N/-S	0.0 usft	Northing: 1,619,576.90 usft
	+E/-W	0.0 usft	Easting: 2,423,275.10 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 39° 31' 0.126 N
			Longitude: 107° 32' 40.001 W
			Ground Level: 6,186.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF200510	11/17/2010	10.199
			Dip Angle (°) 65.868
			Field Strength (nT) 52,407

Design	Design #1 17Nov10 kjs		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°) 65.25

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	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.000	
1,401.6	32.04	65.25	1,335.8	146.2	317.0	2.50	2.50	0.00	65.245	
3,395.7	32.04	65.25	3,026.2	589.1	1,277.7	0.00	0.00	0.00	0.000	
4,997.7	0.00	0.00	4,546.0	771.9	1,674.0	2.00	-2.00	0.00	180.000	
5,097.7	0.00	0.00	4,646.0	771.9	1,674.0	0.00	0.00	0.00	0.000	Top Gas (25' Radius)
7,547.7	0.00	0.00	7,096.0	771.9	1,674.0	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 431-22 - Slot B4
Company:	KOKOPELLI FIELD	TVD Reference:	WELL @ 6209.0usft (Original Well Elev)
Project:	Sec. 22-T6S-R91W	MD Reference:	WELL @ 6209.0usft (Original Well Elev)
Site:	KP 22-22 Pad	North Reference:	True
Well:	KP 431-22	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 17Nov10 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	1,619,576.90	2,423,275.10	39° 31' 0.126 N	107° 32' 40.001 W
120.0	0.00	0.00	120.0	0.0	0.0	1,619,576.90	2,423,275.10	39° 31' 0.126 N	107° 32' 40.001 W
Start Build 2.50									
381.6	6.54	65.25	381.0	6.2	13.5	1,619,582.83	2,423,288.78	39° 31' 0.187 N	107° 32' 39.828 W
Offset Water Well TD									
1,401.6	32.04	65.25	1,335.8	146.2	317.0	1,619,715.90	2,423,595.32	39° 31' 1.570 N	107° 32' 35.956 W
Hold 32.04 Inclination									
1,451.0	32.04	65.25	1,377.7	157.2	340.8	1,619,726.34	2,423,619.37	39° 31' 1.679 N	107° 32' 35.652 W
9 5/8"									
3,395.7	32.04	65.25	3,026.2	589.1	1,277.7	1,620,137.14	2,424,565.73	39° 31' 5.948 N	107° 32' 23.697 W
Start Drop -2.00									
3,740.7	25.14	65.25	3,329.0	658.2	1,427.5	1,620,202.85	2,424,717.09	39° 31' 6.631 N	107° 32' 21.784 W
Mesaverde									
4,654.9	6.86	65.25	4,204.0	763.3	1,655.4	1,620,302.74	2,424,947.21	39° 31' 7.669 N	107° 32' 18.877 W
UMV_PC									
4,997.7	0.00	0.00	4,546.0	771.9	1,674.0	1,620,310.90	2,424,966.00	39° 31' 7.754 N	107° 32' 18.640 W
Vertical									
5,097.7	0.00	0.00	4,646.0	771.9	1,674.0	1,620,310.90	2,424,966.00	39° 31' 7.754 N	107° 32' 18.640 W
Top Gas - Approx. Top Gas									
6,529.7	0.00	0.00	6,078.0	771.9	1,674.0	1,620,310.90	2,424,966.00	39° 31' 7.754 N	107° 32' 18.640 W
Upper Sand									
7,187.7	0.00	0.00	6,736.0	771.9	1,674.0	1,620,310.90	2,424,966.00	39° 31' 7.754 N	107° 32' 18.640 W
Cameo Coals									
7,397.7	0.00	0.00	6,946.0	771.9	1,674.0	1,620,310.90	2,424,966.00	39° 31' 7.754 N	107° 32' 18.640 W
Rollins SS									
7,547.7	0.00	0.00	7,096.0	771.9	1,674.0	1,620,310.90	2,424,966.00	39° 31' 7.754 N	107° 32' 18.640 W
TD at 7547.7 - TD									

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									
Top Gas (25' Radius) KF	0.00	0.00	4,646.0	771.9	1,674.0	1,620,310.90	2,424,966.00	39° 31' 7.754 N	107° 32' 18.640 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,451.0	1,377.7	9 5/8"	9.625	12.250	

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 431-22 - Slot B4
Company:	KOKOPELLI FIELD	TVD Reference:	WELL @ 6209.0usft (Original Well Elev)
Project:	Sec. 22-T6S-R91W	MD Reference:	WELL @ 6209.0usft (Original Well Elev)
Site:	KP 22-22 Pad	North Reference:	True
Well:	KP 431-22	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 17Nov10 kjs		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
381.6	381.0	Offset Water Well TD			
3,740.7	3,329.0	Mesaverde			
4,654.9	4,204.0	UMV_PC			
5,097.7	4,646.0	Approx. Top Gas			
6,529.7	6,078.0	Upper Sand			
7,187.7	6,736.0	Cameo Coals			
7,397.7	6,946.0	Rollins SS			
7,547.7	7,096.0	TD			

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.0	120.0	0.0	0.0	Start Build 2.50	
1,401.6	1,335.8	146.2	317.0	Hold 32.04 Inclination	
3,395.7	3,026.2	589.1	1,277.7	Start Drop -2.00	
4,997.7	4,546.0	771.9	1,674.0	Vertical	
5,097.7	4,646.0	771.9	1,674.0	Top Gas	
7,547.7	7,096.0	771.9	1,674.0	TD at 7547.7	