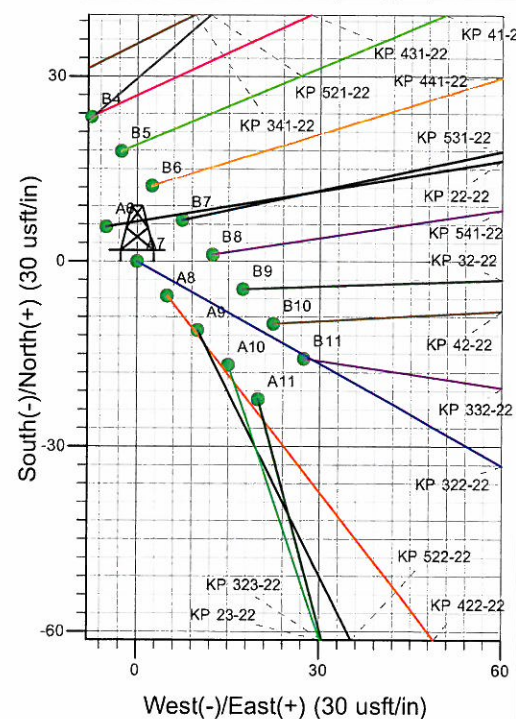
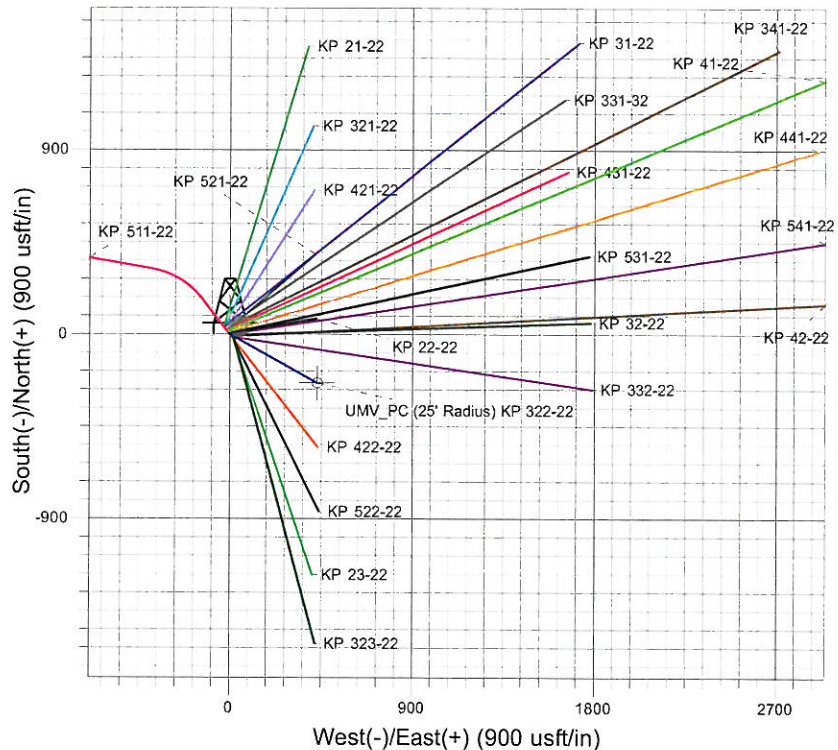
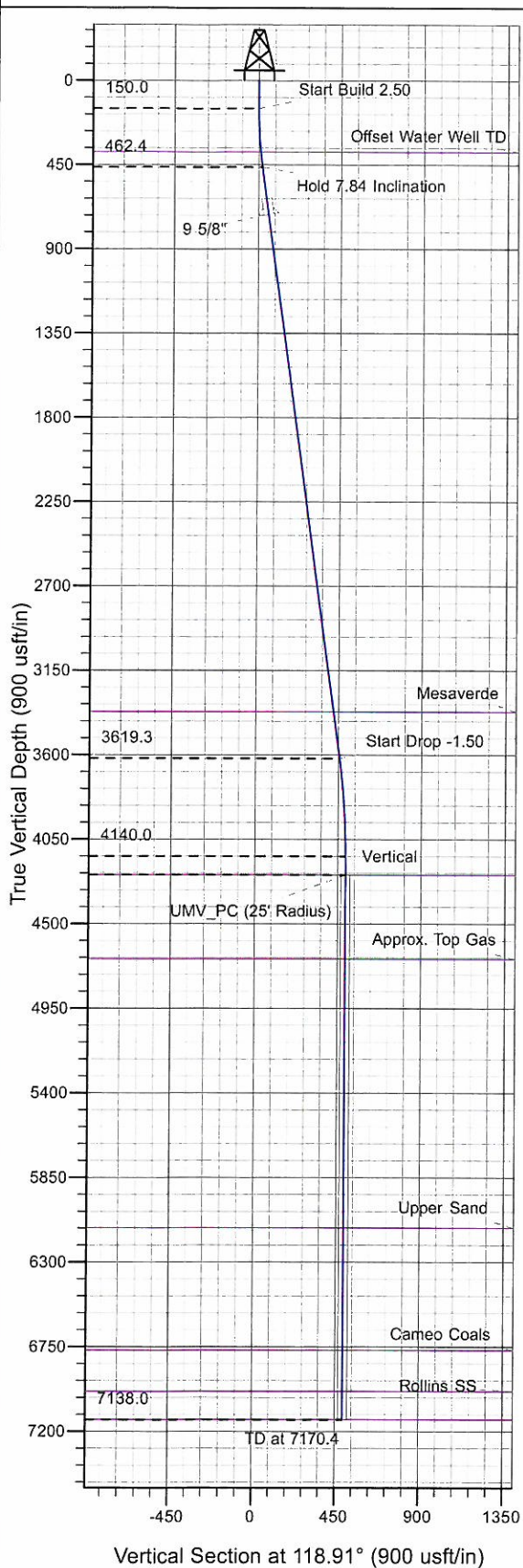




Well Name: KP 322-22
 Surface Location: KP 22-22 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 6186.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1619553.30 2423282.10 39° 30' 59.894 N 107° 32' 39.905 W A7
 WELL @ 6209.0usft (Original Well Elev)



Project: Sec. 22-T6S-R91W
 Site: KP 22-22 Pad
 Well: KP 322-22
 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
150.0	150.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.50
462.4	463.4	7.84	118.91	-10.3	18.7	21.4	21.4	Hold 7.84 Inclination
3619.3	3650.0	7.84	118.91	-220.3	399.0	455.8	455.8	Start Drop -1.50
4140.0	4172.4	0.00	0.00	-237.6	430.3	491.5	491.5	Vertical
4240.0	4272.4	0.00	0.00	-237.6	430.3	491.5	491.5	UMV_PC
7138.0	7170.4	0.00	0.00	-237.6	430.3	491.5	491.5	TD at 7170.4

KOKOPELLI FIELD

Sec. 22-T6S-R91W

KP 22-22 Pad

KP 322-22 - Slot A7

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 322-22 - Slot A7
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 322-22	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 322-22 - Slot A7		
Well Position	+N/-S	0.0 usft	Northing: 1,619,553.30 usft
	+E/-W	0.0 usft	Easting: 2,423,282.10 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 39° 30' 59.894 N
			Longitude: 107° 32' 39.905 W
			Ground Level: 6,186.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/17/2010	10.198	65.868	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)	Direction (°)
	0.0	0.0	0.0	118.91

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	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.000	
463.4	7.84	118.91	462.4	-10.3	18.7	2.50	2.50	0.00	118.907	
3,650.0	7.84	118.91	3,619.3	-220.3	399.0	0.00	0.00	0.00	0.000	
4,172.4	0.00	0.00	4,140.0	-237.6	430.3	1.50	-1.50	0.00	180.000	
4,272.4	0.00	0.00	4,240.0	-237.6	430.3	0.00	0.00	0.00	0.000	UMV_PC (25' Radius)
7,170.4	0.00	0.00	7,138.0	-237.6	430.3	0.00	0.00	0.00	0.000	

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 322-22 - Slot A7
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 322-22	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	1,619,553.30	2,423,282.10	39° 30' 59.894 N	107° 32' 39.905 W	
150.0	0.00	0.00	150.0	0.0	0.0	1,619,553.30	2,423,282.10	39° 30' 59.894 N	107° 32' 39.905 W	
Start Build 2.50										
381.4	5.78	118.91	381.0	-5.6	10.2	1,619,547.43	2,423,292.19	39° 30' 59.838 N	107° 32' 39.775 W	
Offset Water Well TD										
463.4	7.84	118.91	462.4	-10.3	18.7	1,619,542.53	2,423,300.60	39° 30' 59.792 N	107° 32' 39.666 W	
Hold 7.84 Inclination										
717.0	7.84	118.91	713.7	-27.1	49.0	1,619,525.15	2,423,330.48	39° 30' 59.627 N	107° 32' 39.280 W	
9 5/8"										
3,398.4	7.84	118.91	3,370.0	-203.8	369.0	1,619,341.29	2,423,646.43	39° 30' 57.880 N	107° 32' 35.196 W	
Mesaverde										
3,650.0	7.84	118.91	3,619.3	-220.3	399.0	1,619,324.03	2,423,676.08	39° 30' 57.716 N	107° 32' 34.813 W	
Start Drop -1.50										
4,172.4	0.00	0.00	4,140.0	-237.6	430.3	1,619,306.10	2,423,706.90	39° 30' 57.546 N	107° 32' 34.415 W	
Vertical										
4,272.4	0.00	0.00	4,240.0	-237.6	430.3	1,619,306.10	2,423,706.90	39° 30' 57.546 N	107° 32' 34.415 W	
UMV_PC - UMV_PC										
4,720.4	0.00	0.00	4,688.0	-237.6	430.3	1,619,306.10	2,423,706.90	39° 30' 57.546 N	107° 32' 34.415 W	
Approx. Top Gas										
6,149.4	0.00	0.00	6,117.0	-237.6	430.3	1,619,306.10	2,423,706.90	39° 30' 57.546 N	107° 32' 34.415 W	
Upper Sand										
6,801.4	0.00	0.00	6,769.0	-237.6	430.3	1,619,306.10	2,423,706.90	39° 30' 57.546 N	107° 32' 34.415 W	
Cameo Coals										
7,020.4	0.00	0.00	6,988.0	-237.6	430.3	1,619,306.10	2,423,706.90	39° 30' 57.546 N	107° 32' 34.415 W	
Rollins SS										
7,170.4	0.00	0.00	7,138.0	-237.6	430.3	1,619,306.10	2,423,706.90	39° 30' 57.546 N	107° 32' 34.415 W	
TD at 7170.4 - TD										

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	4,240.0	-237.6	430.3	1,619,306.10	2,423,706.90	39° 30' 57.546 N	107° 32' 34.415 W	
- hit/miss target										
- Shape										
- plan hits target center										
- Circle (radius 25.0)										

Casing Points							Casing Diameter (in)	Hole Diameter (in)
Measured Depth (usft)	Vertical Depth (usft)	Name						
717.0	713.7	9 5/8"					9.625	12.250

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 322-22 - Slot A7
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 322-22	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 (°)	
381.4	381.0	Offset Water Well TD				
3,398.4	3,370.0	Mesaverde				
4,272.4	4,240.0	UMV_PC				
4,720.4	4,688.0	Approx. Top Gas				
6,149.4	6,117.0	Upper Sand				
6,801.4	6,769.0	Cameo Coals				
7,020.4	6,988.0	Rollins SS				
7,170.4	7,138.0	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
150.0	150.0	0.0	0.0	Start Build 2.50	
463.4	462.4	-10.3	18.7	Hold 7.84 Inclination	
3,650.0	3,619.3	-220.3	399.0	Start Drop -1.50	
4,172.4	4,140.0	-237.6	430.3	Vertical	
4,272.4	4,240.0	-237.6	430.3	UMV_PC	
7,170.4	7,138.0	-237.6	430.3	TD at 7170.4	