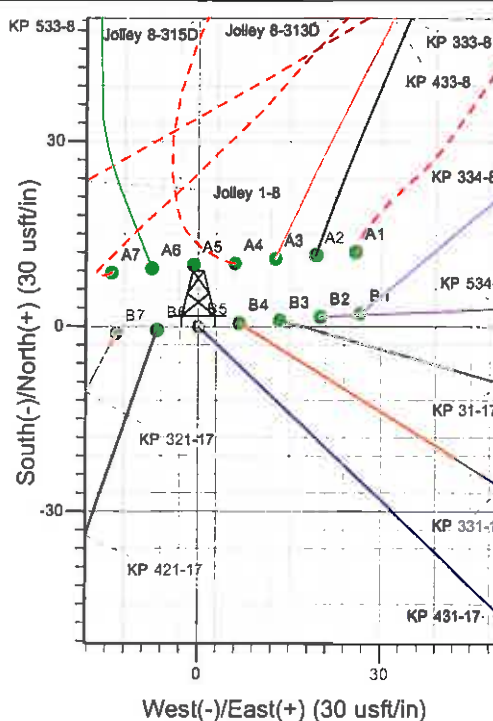
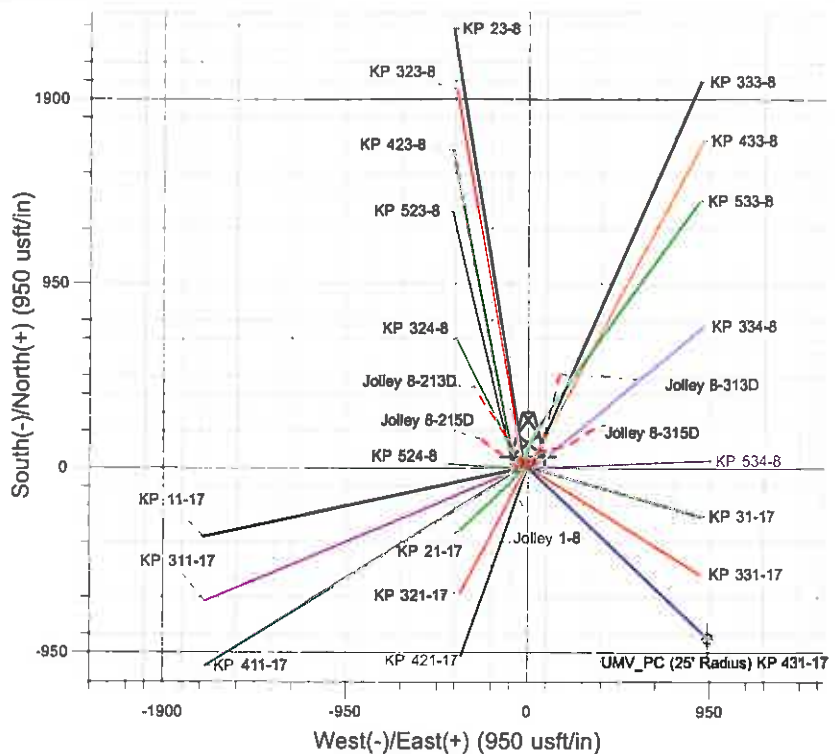
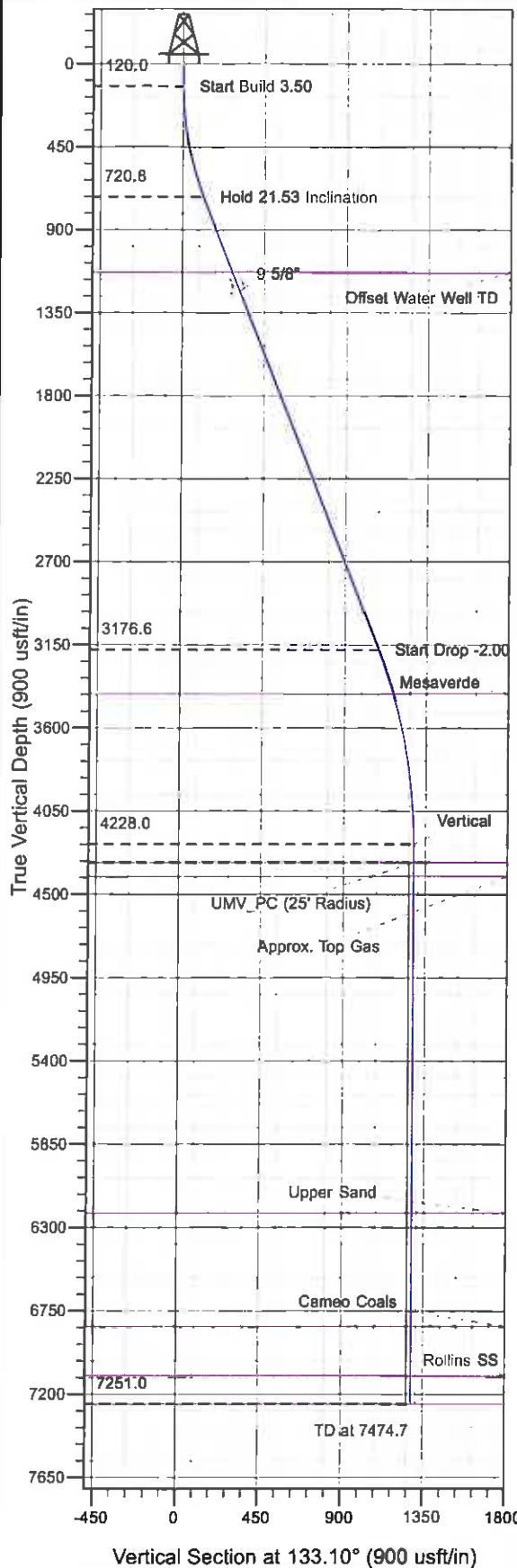




Well Name: KP 431-17
 Surface Location: KP 24-8 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 6526.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1626653.40 2413490.00 39° 32' 7.853 N 107° 34' 46.900 W B5
 KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)



Project: Sec. 08-T6S-R91W
 Site: KP 24-8 Pad
 Well: KP 431-17
 Design #1 04May11 kjs



Azimuths to True North
 Magnetic North: 10.16°
 Magnetic Field
 Strength: 52364.7nT
 Dip Angle: 65.86°
 Date: 5/4/2011
 Model: IGRF200510

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	V	Sed	Departure	Annotation
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	Start Build 3.50
720.8	735.2	21.53	133.10	-78.1	83.4	114.2	114.2	0.0	Hold 21.53 Inclination
3176.6	3375.2	21.53	133.10	-740.1	790.8	1083.1	1083.1	0.0	Start Drop -2.00
4228.0	4451.7	0.00	0.00	-876.7	936.7	1283.0	1283.0	0.0	Vertical
4328.0	4551.7	0.00	0.00	-876.7	936.7	1283.0	1283.0	0.0	UMV_PC
7251.0	7474.7	0.00	0.00	-876.7	936.7	1283.0	1283.0	0.0	TD at 7474.7

KOKOPELLI FIELD

Sec. 08-T6S-R91W

KP 24-8 Pad

KP 431-17 - Slot B5

Wellbore #1

Plan: Design #1 04May11 kjs

Standard Planning Report - Geographic

24 June, 2011

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 431-17 - Slot B5
Company:	KOKEPELLI FIELD	TVD Reference:	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
Project:	Sec. 08-T6S-R91W	MD Reference:	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
Site:	KP 24-8 Pad	North Reference:	True
Well:	KP 431-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 04May11 kjs		

Project	Sec. 08-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		Using geodetic scale factor

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

Well	KP 431-17 - Slot B5			
Well Position	+N/-S	0.0 usft	Northing: 1,626,653.40 usft	Latitude: 39° 32' 7.853 N
	+E/-W	0.0 usft	Easting: 2,413,490.00 usft	Longitude: 107° 34' 46.900 W
Position Uncertainty	0.0 usft	Wellhead Elevation:		Ground Level: 6,526.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	5/4/2011	10.156	65.865	52,365

Design	Design #1 04May11 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	133.10

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	
735.2	21.53	133.10	720.8	-78.1	83.4	3.50	3.50	0.00	133.104	
3,375.2	21.53	133.10	3,176.6	-740.1	790.8	0.00	0.00	0.00	0.000	
4,451.7	0.00	0.00	4,228.0	-876.7	936.7	2.00	-2.00	0.00	180.000	
4,551.7	0.00	0.00	4,328.0	-876.7	936.7	0.00	0.00	0.00	0.000	UMV_PC (25' Radius)
7,474.7	0.00	0.00	7,251.0	-876.7	936.7	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 431-17 - Slot B5
Company:	KOKEPELLI FIELD	TVD Reference:	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
Project:	Sec. 08-T6S-R91W	MD Reference:	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
Site:	KP 24-8 Pad	North Reference:	True
Well:	KP 431-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	1,626,653.40	2,413,490.00	39° 32' 7.853 N	107° 34' 46.900 W
120.0	0.00	0.00	120.0	0.0	0.0	1,626,653.40	2,413,490.00	39° 32' 7.853 N	107° 34' 46.900 W
Start Build 3.50									
735.2	21.53	133.10	720.8	-78.1	83.4	1,626,573.46	2,413,571.59	39° 32' 7.082 N	107° 34' 45.835 W
Hold 21.53 Inclination									
1,174.0	21.53	133.10	1,129.0	-188.1	201.0	1,626,460.75	2,413,686.62	39° 32' 5.994 N	107° 34' 44.334 W
Offset Water Well TD									
1,281.5	21.53	133.10	1,229.0	-215.1	229.8	1,626,433.14	2,413,714.80	39° 32' 5.728 N	107° 34' 43.967 W
9 5/8"									
3,375.2	21.53	133.10	3,176.6	-740.1	790.8	1,625,895.39	2,414,263.63	39° 32' 0.538 N	107° 34' 36.806 W
Start Drop -2.00									
3,626.4	16.51	133.10	3,414.0	-796.0	850.5	1,625,838.13	2,414,322.07	39° 31' 59.986 N	107° 34' 36.044 W
Mesaverde									
4,451.7	0.00	0.00	4,228.0	-876.7	936.7	1,625,755.50	2,414,406.40	39° 31' 59.188 N	107° 34' 34.944 W
Vertical									
4,551.7	0.00	0.00	4,328.0	-876.7	936.7	1,625,755.50	2,414,406.40	39° 31' 59.188 N	107° 34' 34.944 W
UMV_PC - UMV_PC									
4,624.7	0.00	0.00	4,401.0	-876.7	936.7	1,625,755.50	2,414,406.40	39° 31' 59.188 N	107° 34' 34.944 W
Approx. Top Gas									
6,444.7	0.00	0.00	6,221.0	-876.7	936.7	1,625,755.50	2,414,406.40	39° 31' 59.188 N	107° 34' 34.944 W
Upper Sand									
7,055.7	0.00	0.00	6,832.0	-876.7	936.7	1,625,755.50	2,414,406.40	39° 31' 59.188 N	107° 34' 34.944 W
Cameo Coals									
7,324.7	0.00	0.00	7,101.0	-876.7	936.7	1,625,755.50	2,414,406.40	39° 31' 59.188 N	107° 34' 34.944 W
Rollins SS									
7,474.7	0.00	0.00	7,251.0	-876.7	936.7	1,625,755.50	2,414,406.40	39° 31' 59.188 N	107° 34' 34.944 W
TD at 7474.7 - 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									
UMV_PC (25' Radius) K	0.00	0.00	4,328.0	-876.7	936.7	1,625,755.50	2,414,406.40	39° 31' 59.188 N	107° 34' 34.944 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,281.5	1,229.0	9 5/8"	9.625	12.250	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 431-17 - Slot B5
Company:	KOKOPELLI FIELD	TVD Reference:	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
Project:	Sec. 08-T6S-R91W	MD Reference:	KELLY BUSHING @ 6548.0usft (Cyclone 17 (22' RKB) kjs)
Site:	KP 24-8 Pad	North Reference:	True
Well:	KP 431-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 04May11 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")	
1,174.0	1,129.0	Offset Water Well TD				
3,626.4	3,414.0	Mesaverde				
4,551.7	4,328.0	UMV_PC				
4,624.7	4,401.0	Approx. Top Gas				
6,444.7	6,221.0	Upper Sand				
7,055.7	6,832.0	Cameo Coals				
7,324.7	7,101.0	Rollins SS				
7,474.7	7,251.0	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 3.50	
735.2	720.8	-78.1	83.4	Hold 21.53 Inclination	
3,375.2	3,176.6	-740.1	790.8	Start Drop -2.00	
4,451.7	4,228.0	-876.7	936.7	Vertical	
4,551.7	4,328.0	-876.7	936.7	UMV_PC	
7,474.7	7,251.0	-876.7	936.7	TD at 7474.7	