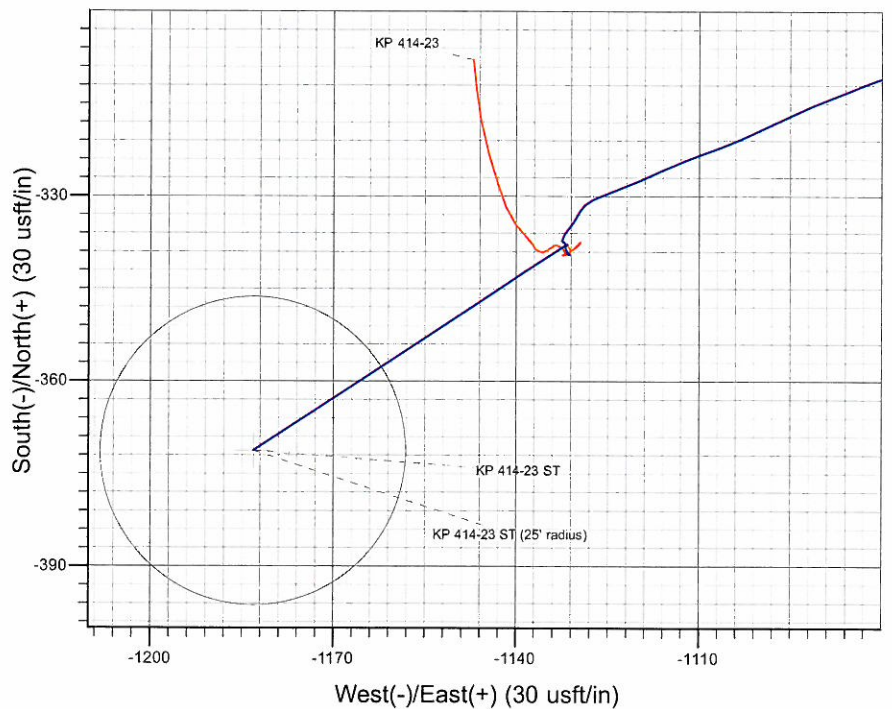
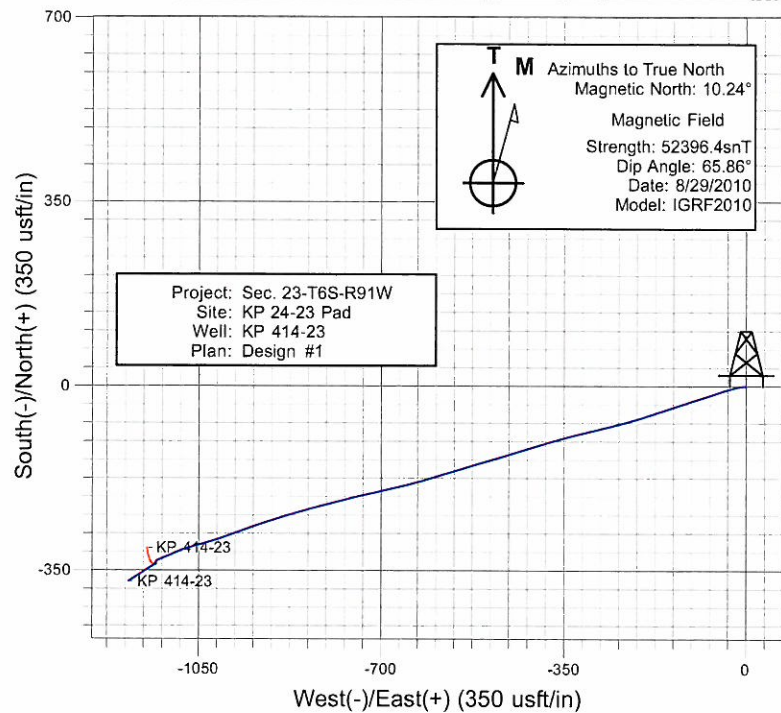
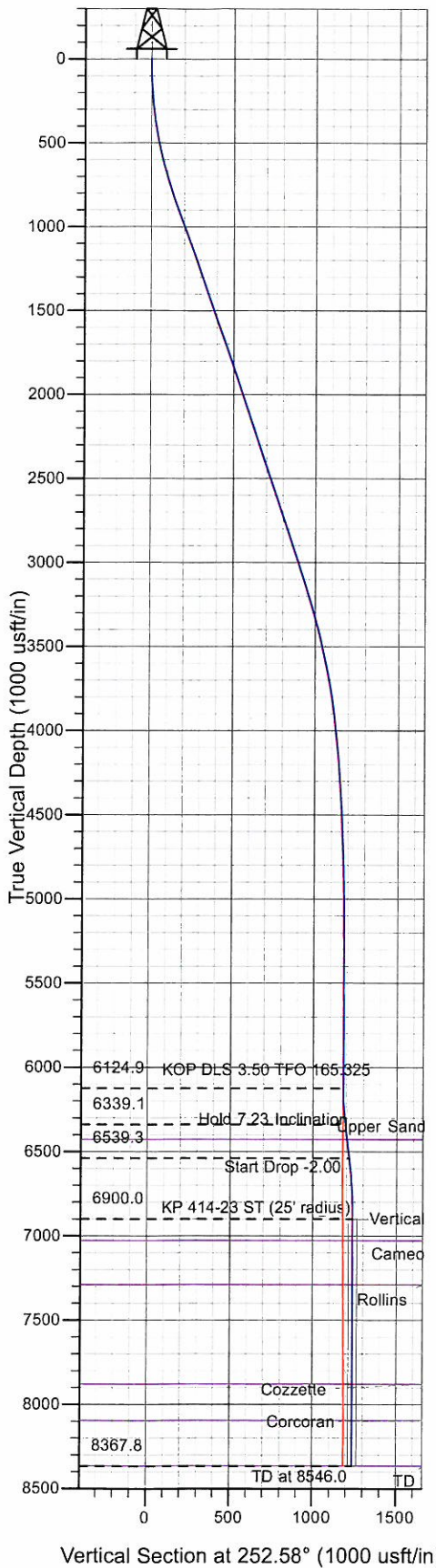




Well Name: KP 414-23
 Surface Location: KP 24-23 Pad
 North American Datum 1983, US State Plane 1983, Colorado Central Zone
 Ground Elevation: 6321.0
 +N/-S/E/-W Northing Easting Longitude Slot
 0.0 0.01616656.142428825.289° 30' 32.494 N 07° 31' 28.364 W A6
 Cyclone 30 KB @ 6344.0usft (Cyclone 30)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	6300.0	0.29	72.26	6124.9	-337.8	-1131.8	0.00	0.000	1181.1	
2	6514.8	7.23	237.00	6339.1	-345.0	-1142.7	3.50	165.325	1193.6	
3	6716.5	7.23	237.00	6539.3	-358.9	-1164.0	0.00	0.000	1218.0	
4	7078.2	0.00	0.00	6900.0	-371.3	-1183.1	2.00	180.000	1240.0	KP 414-23 ST (25' radius)
5	8546.0	0.00	0.00	8367.8	-371.3	-1183.1	0.00	0.000	1240.0	

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
6124.9	6300.0	0.29	72.26	-337.8	-1131.8	1181.1	0.0	KOP DLS 3.50 TFO 165.325
6339.1	6514.8	7.23	237.00	-345.0	-1142.7	1193.6	14.1	Hold 7.23 Inclination
6539.3	6716.5	7.23	237.00	-358.9	-1164.0	1218.0	39.5	Start Drop -2.00
6900.0	7078.2	0.00	0.00	-371.3	-1183.1	1240.0	62.3	Vertical
8367.8	8546.0	0.00	0.00	-371.3	-1183.1	1240.0	62.3	TD at 8546.0

KOKOPELLI FIELD

Sec. 23-T6S-R91W

KP 24-23 Pad

KP 414-23 - Slot A6

KP 414-23 ST Wellbore #2

Plan: Design #1

Standard Planning Report - Geographic

29 August, 2010

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 414-23 - Slot A6
Company:	KOKOPELLI FIELD	TVD Reference:	KB @ 6344.0usft (Cyclone 30)
Project:	Sec. 23-T6S-R91W	MD Reference:	KB @ 6344.0usft (Cyclone 30)
Site:	KP 24-23 Pad	North Reference:	True
Well:	KP 414-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	KP 414-23 ST Wellbore #2		
Design:	Design #1		

Project	Sec. 23-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 24-23 Pad			
Site Position:		Northing:	1,616,658.70 usft	Latitude:	39° 30' 32.535 N
From:	Map	Easting:	2,428,899.10 usft	Longitude:	107° 31' 27.423 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.277 °

Well	KP 414-23 - Slot A6					
Well Position	+N/-S	0.0 usft	Northing:	1,616,656.14 usft	Latitude:	39° 30' 32.494 N
	+E/-W	0.0 usft	Easting:	2,428,825.28 usft	Longitude:	107° 31' 28.364 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	6,321.0 usft

Wellbore	KP 414-23 ST Wellbore #2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/29/2010	10.243	65.860	52,396

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	6,300.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	252.58

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
6,300.0	0.29	72.26	6,124.9	-337.8	-1,131.8	0.00	0.00	0.00	0.000	
6,514.8	7.23	237.00	6,339.1	-345.0	-1,142.7	3.50	3.23	76.71	165.325	
6,716.5	7.23	237.00	6,539.3	-358.9	-1,164.0	0.00	0.00	0.00	0.000	
7,078.2	0.00	0.00	6,900.0	-371.3	-1,183.1	2.00	-2.00	0.00	180.000	KP 414-23 ST (25' rad
8,546.0	0.00	0.00	8,367.8	-371.3	-1,183.1	0.00	0.00	0.00	0.000	

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
6,300.0	0.29	72.26	6,124.9	-337.8	-1,131.8	1,616,343.60	2,427,686.20	39° 30' 29.154 N	107° 31' 42.806 W	
6,514.8	7.23	237.00	6,339.1	-345.0	-1,142.7	1,616,336.64	2,427,675.21	39° 30' 29.083 N	107° 31' 42.944 W	
6,716.5	7.23	237.00	6,539.3	-358.9	-1,164.0	1,616,323.28	2,427,653.60	39° 30' 28.946 N	107° 31' 43.216 W	
7,078.2	0.00	0.00	6,900.0	-371.3	-1,183.1	1,616,311.30	2,427,634.20	39° 30' 28.824 N	107° 31' 43.460 W	
8,546.0	0.00	0.00	8,367.8	-371.3	-1,183.1	1,616,311.30	2,427,634.20	39° 30' 28.824 N	107° 31' 43.460 W	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well KP 414-23 - Slot A6
Company:	KOKOPELLI FIELD	TVD Reference:	KB @ 6344.0usft (Cyclone 30)
Project:	Sec. 23-T6S-R91W	MD Reference:	KB @ 6344.0usft (Cyclone 30)
Site:	KP 24-23 Pad	North Reference:	True
Well:	KP 414-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	KP 414-23 ST Wellbore #2		
Design:	Design #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
KP 414-23 ST (25' radius: - plan hits target center - Circle (radius 25.0)	0.00	0.00	6,900.0	-371.3	-1,183.1	1,616,311.30	2,427,634.20	39° 30' 28.824 N	107° 31' 43.460 W

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,604.3	6,428.0	Upper Sand		0.000		
7,206.2	7,028.0	Cameo		0.000		
7,468.2	7,290.0	Rollins		0.000		
8,058.2	7,880.0	Cozzette		0.000		
8,273.2	8,095.0	Corcoran		0.000		
8,546.0	8,367.8	TD				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
6,300.0	6,124.9	-337.8	-1,131.8	KOP DLS 3.50 TFO 165.325	
6,514.8	6,339.1	-345.0	-1,142.7	Hold 7.23 Inclination	
6,716.5	6,539.3	-358.9	-1,164.0	Start Drop -2.00	
7,078.2	6,900.0	-371.3	-1,183.1	Vertical	
8,546.0	8,367.8	-371.3	-1,183.1	TD at 8546.0	