

Cimarex Energy Co.

Eddy County (NM83E)

Ringer Fee

#9

Wellbore #1

Plan: Plan #1

Standard Planning Report

17 August, 2009

Great White Directional Services

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #9
Company:	Cimarex Energy Co.	TVD Reference:	WELL @ 3313.0usft (Original Well Elev)
Project:	Eddy County (NM83E)	MD Reference:	WELL @ 3313.0usft (Original Well Elev)
Site:	Ringer Fee	North Reference:	Grid
Well:	#9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project:	Eddy County (NM83E)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Ringer Fee		
Site Position:		Northing:	419,236.10 usft
From:	Map	Easting:	553,217.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 9' 9.190 N
		Longitude:	104° 17' 41.801 W
		Grid Convergence:	0.02 °

Well:	#9		
Well Position	+N/-S	0.0 usft	Northing: 419,236.10 usft
	+E/-W	0.0 usft	Easting: 553,217.80 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 32° 9' 9.190 N
			Longitude: 104° 17' 41.801 W
			Ground Level: 3,313.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/08/17	8.11	60.05	48,704

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	347.40

Plan Sections									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)
(usft)			(usft)			(°/100ft)	(°/100ft)	(°/100ft)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,625.0	0.00	0.00	2,625.0	0.0	0.0	0.00	0.00	0.00	0.00
2,925.0	90.00	347.40	2,816.0	186.4	-41.7	30.00	30.00	0.00	347.40
4,876.9	90.00	347.40	2,816.0	2,091.2	-467.5	0.00	0.00	0.00	-90.00 Ringer Fee #9 PBH

Great White Directional Services

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Database: EDM 5000.1 Single User Db
Company: Cimarex Energy Co.
Project: Eddy County (NM83E)
Site: Ringer Fee
Well: #9
Wellbore: Wellbore #1
Design: Plan #1

Local Co-ordinate Reference: Well #9
TVD Reference: WELL @ 3313.0usft (Original Well Elev)
MD Reference: WELL @ 3313.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,625.0	0.00	0.00	2,625.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 30° DLS, 347.40° AZI									
2,630.0	1.50	347.40	2,630.0	0.1	0.0	0.1	30.00	30.00	0.00
2,640.0	4.50	347.40	2,640.0	0.6	-0.1	0.6	30.00	30.00	0.00
2,650.0	7.50	347.40	2,649.9	1.6	-0.4	1.6	30.00	30.00	0.00
2,660.0	10.50	347.40	2,659.8	3.1	-0.7	3.2	30.00	30.00	0.00
2,670.0	13.50	347.40	2,669.6	5.1	-1.2	5.3	30.00	30.00	0.00
2,680.0	16.50	347.40	2,679.2	7.7	-1.7	7.9	30.00	30.00	0.00
2,690.0	19.50	347.40	2,688.8	10.7	-2.4	11.0	30.00	30.00	0.00
2,700.0	22.50	347.40	2,698.1	14.2	-3.2	14.5	30.00	30.00	0.00
2,710.0	25.50	347.40	2,707.2	18.2	-4.1	18.6	30.00	30.00	0.00
2,720.0	28.50	347.40	2,716.1	22.6	-5.0	23.1	30.00	30.00	0.00
2,730.0	31.50	347.40	2,724.8	27.5	-6.1	28.1	30.00	30.00	0.00
2,740.0	34.50	347.40	2,733.2	32.8	-7.3	33.6	30.00	30.00	0.00
2,750.0	37.50	347.40	2,741.3	38.5	-8.6	39.5	30.00	30.00	0.00
2,760.0	40.50	347.40	2,749.0	44.7	-10.0	45.8	30.00	30.00	0.00
2,770.0	43.50	347.40	2,756.5	51.2	-11.4	52.4	30.00	30.00	0.00
2,780.0	46.50	347.40	2,763.5	58.1	-13.0	59.5	30.00	30.00	0.00
2,790.0	49.50	347.40	2,770.2	65.3	-14.6	66.9	30.00	30.00	0.00
2,800.0	52.50	347.40	2,776.5	72.9	-16.3	74.7	30.00	30.00	0.00
2,810.0	55.50	347.40	2,782.4	80.8	-18.1	82.8	30.00	30.00	0.00
2,820.0	58.50	347.40	2,787.8	89.0	-19.9	91.2	30.00	30.00	0.00
2,830.0	61.50	347.40	2,792.8	97.4	-21.8	99.8	30.00	30.00	0.00
2,840.0	64.50	347.40	2,797.4	106.1	-23.7	108.8	30.00	30.00	0.00
2,850.0	67.50	347.40	2,801.5	115.1	-25.7	117.9	30.00	30.00	0.00
2,860.0	70.49	347.40	2,805.0	124.2	-27.8	127.2	30.00	30.00	0.00
2,870.0	73.49	347.40	2,808.1	133.4	-29.8	136.7	30.00	30.00	0.00
2,880.0	76.49	347.40	2,810.7	142.9	-31.9	146.4	30.00	30.00	0.00
2,890.0	79.49	347.40	2,812.8	152.4	-34.1	156.2	30.00	30.00	0.00
2,900.0	82.49	347.40	2,814.4	162.1	-36.2	166.0	30.00	30.00	0.00
2,910.0	85.49	347.40	2,815.4	171.8	-38.4	176.0	30.00	30.00	0.00
2,920.0	88.49	347.40	2,815.9	181.5	-40.6	186.0	30.00	30.00	0.00
2,925.0	90.00	347.40	2,816.0	186.4	-41.7	191.0	30.00	30.00	0.00
EOC 347.40°									
3,000.0	90.00	347.40	2,816.0	259.6	-58.0	266.0	0.00	0.00	0.00
3,100.0	90.00	347.40	2,816.0	357.2	-79.8	366.0	0.00	0.00	0.00
3,200.0	90.00	347.40	2,816.0	454.8	-101.7	466.0	0.00	0.00	0.00
3,300.0	90.00	347.40	2,816.0	552.3	-123.5	566.0	0.00	0.00	0.00
3,400.0	90.00	347.40	2,816.0	649.9	-145.3	666.0	0.00	0.00	0.00
3,500.0	90.00	347.40	2,816.0	747.5	-167.1	766.0	0.00	0.00	0.00
3,600.0	90.00	347.40	2,816.0	845.1	-188.9	866.0	0.00	0.00	0.00
3,700.0	90.00	347.40	2,816.0	942.7	-210.7	966.0	0.00	0.00	0.00
3,800.0	90.00	347.40	2,816.0	1,040.3	-232.5	1,066.0	0.00	0.00	0.00
3,900.0	90.00	347.40	2,816.0	1,137.9	-254.4	1,166.0	0.00	0.00	0.00
4,000.0	90.00	347.40	2,816.0	1,235.5	-276.2	1,266.0	0.00	0.00	0.00
4,100.0	90.00	347.40	2,816.0	1,333.1	-298.0	1,366.0	0.00	0.00	0.00
4,200.0	90.00	347.40	2,816.0	1,430.7	-319.8	1,466.0	0.00	0.00	0.00
4,300.0	90.00	347.40	2,816.0	1,528.3	-341.6	1,566.0	0.00	0.00	0.00
4,400.0	90.00	347.40	2,816.0	1,625.8	-363.5	1,666.0	0.00	0.00	0.00
4,500.0	90.00	347.40	2,816.0	1,723.4	-385.3	1,766.0	0.00	0.00	0.00
4,600.0	90.00	347.40	2,816.0	1,821.0	-407.1	1,866.0	0.00	0.00	0.00
4,700.0	90.00	347.40	2,816.0	1,918.6	-428.9	1,966.0	0.00	0.00	0.00
4,800.0	90.00	347.40	2,816.0	2,016.2	-450.7	2,066.0	0.00	0.00	0.00
4,876.9	90.00	347.40	2,816.0	2,091.2	-467.5	2,142.9	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
TD at 4876.9' MD - Ringer Fee #9 PBHL									

Design Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Ringer Fee #9 PBHL	- plan hits target center	0.00	0.00	2,816.0	2,091.2	-467.5	421,327.34	552,750.29	32° 9' 29.886 N	104° 17' 47.231 W
	- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,625.0	2,625.0	0.0	0.0	KOP 30° DLS, 347.40° AZI
2,925.0	2,816.0	186.4	-41.7	EOC 347.40°
4,876.9	2,816.0	2,091.2	-467.5	TD at 4876.9' MD