



Cimarex Energy Co., Inc.

Lea County (NAD 83)

Windom 12 Fee #2

Windom 12 Fee #2

Lateral #1

Plan: Plan #1

Standard Survey Report

26 July, 2007





Black Viper Energy Survey Report



Company: Cimarex Energy Co., Inc
Project: Lea County (NAD 83)
Site: Windom 12 Fee #2
Well: Windom 12 Fee #2
Wellbore: Lateral #1
Design: Plan #1

Local Co-ordinate Reference: Well Windom 12 Fee #2
TVD Reference: WELL @ 0 00ft (Original Well Elev)
MD Reference: WELL @ 0 00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 14 1 0 Server DB

Project Lea County (NAD 83)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum: Ground Level

Site Windom 12 Fee #2

Site Position: Northing: 743,377 26 ft Latitude: 33° 2' 16 402 N
From: Map Easting: 905,063 78 ft Longitude: 103° 8' 47 234 W
Position Uncertainty: 0 00 ft Slot Radius: " Grid Convergence: 0 65 °

Well Windom 12 Fee #2

Well Position +N/-S 0 00 ft Northing: 743,377 26 ft Latitude: 33° 2' 16 402 N
+E/-W 0 00 ft Easting: 905,063 78 ft Longitude: 103° 8' 47 234 W
Position Uncertainty 0 00 ft Wellhead Elevation: ft Ground Level: 0 00 ft

Wellbore Lateral #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	7/10/2007	7 91	61 13	49,571

Design Plan #1

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 9,212 00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0 00	0 00	180 00

Survey Tool Program Date 7/26/2007

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
9,212 00	13,844 76	Plan #1 (Lateral #1)	MWD	MWD - Standard

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,212 01	0 00	0 00	9,212 01	0 00	0 00	0 00	0 00	0 00	0 00
KOP - Build 30.0° / 100									
9,220 00	2 40	180 00	9,220 00	-0 17	0 00	0 17	30 00	30 00	0 00
9,230 00	5 40	180 00	9,229 97	-0 85	0 00	0 85	30 00	30 00	0 00
9,240 00	8 40	180 00	9,239 90	-2 05	0 00	2 05	30 00	30 00	0 00
9,250 00	11 40	180 00	9,249 75	-3 77	0 00	3 77	30 00	30 00	0 00
9,260 00	14 40	180 00	9,259 50	-6 00	0 00	6 00	30 00	30 00	0 00
9,270 00	17 40	180 00	9,269 11	-8 74	0 00	8 74	30 00	30 00	0 00
9,280 00	20 40	180 00	9,278 57	-11 97	0 00	11 97	30 00	30 00	0 00
9,290 00	23 40	180 00	9,287 85	-15 70	0 00	15 70	30 00	30 00	0 00
9,300 00	26 40	180 00	9,296 92	-19 91	0 00	19 91	30 00	30 00	0 00
9,310 00	29 40	180 00	9,305 76	-24 59	0 00	24 59	30 00	30 00	0 00
9,320 00	32 40	180 00	9,314 34	-29 72	0 00	29 72	30 00	30 00	0 00



Black Viper Energy
Survey Report



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Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,330 00	35 40	180 00	9,322 64	-35 30	0 00	35 30	30 00	30 00	0 00
9,340 00	38 40	180 00	9,330 63	-41 30	0 00	41 30	30 00	30 00	0 00
9,350 00	41 40	180 00	9,338 30	-47 72	0 00	47 72	30 00	30 00	0 00
9,357 73	43 72	180 00	9,344 00	-52 95	0 00	52 95	30 00	30 00	0 00
Wolfcamp									
9,360 00	44 40	180 00	9,345 63	-54 52	0 00	54 52	30 00	30 00	0 00
9,370 00	47 40	180 00	9,352 59	-61 70	0 00	61 70	30 00	30 00	0 00
9,380 00	50 40	180 00	9,359 16	-69 24	0 00	69 24	30 00	30 00	0 00
9,390 00	53 40	180 00	9,365 33	-77 10	0 00	77 10	30 00	30 00	0 00
9,400 00	56 40	180 00	9,371 08	-85 28	0 00	85 28	30 00	30 00	0 00
9,410 00	59 40	180 00	9,376 40	-93 75	0 00	93 75	30 00	30 00	0 00
9,420 00	62 40	180 00	9,381 26	-102 49	0 00	102 49	30 00	30 00	0 00
9,430 00	65 40	180 00	9,385 66	-111 47	0 00	111 47	30 00	30 00	0 00
9,440 00	68 40	180 00	9,389 58	-120 67	0 00	120 67	30 00	30 00	0 00
9,450 00	71 40	180 00	9,393 02	-130 06	0 00	130 06	30 00	30 00	0 00
9,460 00	74 40	180 00	9,395 96	-139 61	0 00	139 61	30 00	30 00	0 00
9,470 00	77 40	180 00	9,398 40	-149 31	0 00	149 31	30 00	30 00	0 00
9,480 00	80 40	180 00	9,400 32	-159 12	0 00	159 12	30 00	30 00	0 00
9,490 00	83 40	180 00	9,401 73	-169 02	0 00	169 02	30 00	30 00	0 00
9,500 00	86 40	180 00	9,402 62	-178 98	0 00	178 98	30 00	30 00	0 00
9,510 00	89 40	180 00	9,402 99	-188 97	0 00	188 97	30 00	30 00	0 00
9,512 01	90 00	180 00	9,403 00	-190 99	0 00	190 99	30 00	30 00	0 00
EOC - Hold 90.0° Inc.. :: 180.0° Azi.									
9,600 00	90 00	180 00	9,403 00	-278 97	0 00	278 97	0 00	0 00	0 00
9,700 00	90 00	180 00	9,403 00	-378 97	0 00	378 97	0 00	0 00	0 00
9,800 00	90 00	180 00	9,403 00	-478 97	0 00	478 97	0 00	0 00	0 00
9,900 00	90 00	180 00	9,403 00	-578 97	0 00	578 97	0 00	0 00	0 00
10,000 00	90 00	180 00	9,403 00	-678 97	0 00	678 97	0 00	0 00	0 00
10,100 00	90 00	180 00	9,403 00	-778 97	0 00	778 97	0 00	0 00	0 00
10,200 00	90 00	180 00	9,403 00	-878 97	0 00	878 97	0 00	0 00	0 00
10,300 00	90 00	180 00	9,403 00	-978 97	0 00	978 97	0 00	0 00	0 00
10,400 00	90 00	180 00	9,403 00	-1,078 97	0 00	1,078 97	0 00	0 00	0 00
10,500 00	90 00	180 00	9,403 00	-1,178 97	0 00	1,178 97	0 00	0 00	0 00
10,600 00	90 00	180 00	9,403 00	-1,278 97	0 00	1,278 97	0 00	0 00	0 00
10,700 00	90 00	180 00	9,403 00	-1,378 97	0 00	1,378 97	0 00	0 00	0 00
10,800 00	90 00	180 00	9,403 00	-1,478 97	0 00	1,478 97	0 00	0 00	0 00
10,900 00	90 00	180 00	9,403 00	-1,578 97	0 00	1,578 97	0 00	0 00	0 00
11,000 00	90 00	180 00	9,403 00	-1,678 97	0 00	1,678 97	0 00	0 00	0 00
11,100 00	90 00	180 00	9,403 00	-1,778 97	0 00	1,778 97	0 00	0 00	0 00
11,200 00	90 00	180 00	9,403 00	-1,878 97	0 00	1,878 97	0 00	0 00	0 00
11,300 00	90 00	180 00	9,403 00	-1,978 97	0 00	1,978 97	0 00	0 00	0 00
11,400 00	90 00	180 00	9,403 00	-2,078 97	0 00	2,078 97	0 00	0 00	0 00
11,500 00	90 00	180 00	9,403 00	-2,178 97	0 00	2,178 97	0 00	0 00	0 00
11,600 00	90 00	180 00	9,403 00	-2,278 97	0 00	2,278 97	0 00	0 00	0 00
11,700 00	90 00	180 00	9,403 00	-2,378 97	0 00	2,378 97	0 00	0 00	0 00
11,800 00	90 00	180 00	9,403 00	-2,478 97	0 00	2,478 97	0 00	0 00	0 00
11,900 00	90 00	180 00	9,403 00	-2,578 97	0 00	2,578 97	0 00	0 00	0 00
12,000 00	90 00	180 00	9,403 00	-2,678 97	0 00	2,678 97	0 00	0 00	0 00
12,100 00	90 00	180 00	9,403 00	-2,778 97	0 00	2,778 97	0 00	0 00	0 00
12,200 00	90 00	180 00	9,403 00	-2,878 97	0 00	2,878 97	0 00	0 00	0 00
12,300 00	90 00	180 00	9,403 00	-2,978 97	0 00	2,978 97	0 00	0 00	0 00
12,400 00	90 00	180 00	9,403 00	-3,078 97	0 00	3,078 97	0 00	0 00	0 00
12,500 00	90 00	180 00	9,403 00	-3,178 97	0 00	3,178 97	0 00	0 00	0 00
12,600 00	90 00	180 00	9,403 00	-3,278 97	0 00	3,278 97	0 00	0 00	0 00



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North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 14 1 0 Server DB

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12,700 00	90 00	180 00	9,403 00	-3,378 97	0 00	3,378 97	0 00	0 00	0 00
12,800 00	90 00	180 00	9,403 00	-3,478 97	0 00	3,478 97	0 00	0 00	0 00
12,900 00	90 00	180 00	9,403 00	-3,578 97	0 00	3,578 97	0 00	0 00	0 00
13,000 00	90 00	180 00	9,403 00	-3,678 97	0 00	3,678 97	0 00	0 00	0 00
13,100 00	90 00	180 00	9,403 00	-3,778 97	0 00	3,778 97	0 00	0 00	0 00
13,200 00	90 00	180 00	9,403 00	-3,878 97	0 00	3,878 97	0 00	0 00	0 00
13,300 00	90 00	180 00	9,403 00	-3,978 97	0 00	3,978 97	0 00	0 00	0 00
13,400 00	90 00	180 00	9,403 00	-4,078 97	0 00	4,078 97	0 00	0 00	0 00
13,500 00	90 00	180 00	9,403 00	-4,178 97	0 00	4,178 97	0 00	0 00	0 00
13,600 00	90 00	180 00	9,403 00	-4,278 97	0 00	4,278 97	0 00	0 00	0 00
13,700 00	90 00	180 00	9,403 00	-4,378 97	0 00	4,378 97	0 00	0 00	0 00
13,800 00	90 00	180 00	9,403 00	-4,478 97	0 00	4,478 97	0 00	0 00	0 00
13,844 76	90 00	180 00	9,403 00	-4,523 73	0 00	4,523 73	0 00	0 00	0 00

PBHL#1[W12Fee#2]

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL#1[W12Fee#2]	0 00	0 89	9,403 00	-4,523 73	0 00	738,853 53	905,063 78	33° 1' 31 651 N	103° 8' 47 834 W
- plan hits target									
- Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
9,357 73	9,344 00	Wolfcamp		0 00	0 00
	9,616 00	Wolfcamp 'B'		0 00	0 00

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates	Comment
9,212 01	9,212 01	+N/-S (ft) 0 00 +E/-W (ft) 0 00	KOP - Build 30 0° / 100
9,512 01	9,403 00	+N/-S (ft) -121 63 +E/-W (ft) -147 24	EOC - Hold 90 0° Inc 180 0° Azi

Checked By _____ Approved By _____ Date: _____