



Cimarex Energy Co., Inc.

Lea County (NAD 83)

Little Bear 7 Fee #2H

Little Bear 7 Fee #2H

Lateral

Plan: Plan #1

Standard Survey Report

10 October, 2007





Black Viper Energy Survey Report



Company: Cimarex Energy Co., Inc.
Project: Lea County (NAD 83)
Site: Little Bear 7 Fee #2H
Well: Little Bear 7 Fee #2H
Wellbore: Lateral
Design: Plan #1

Local Co-ordinate Reference: Well Little Bear 7 Fee #2H
TVD Reference: WELL @ 3772 00ft (Original Well Elev)
MD Reference: WELL @ 3772 00ft (Original Well Elev)
North Reference: Grd
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: Mean Sea Level

Site: Little Bear 7 Fee #2H

Site Position: Northing: 738,981 40 ft Latitude: 33° 1' 32 665 N
From: Map Easting: 907,299 90 ft Longitude: 103° 8' 21 557 W
Position Uncertainty: 0 00 ft Slot Radius: " Grid Convergence: 0 65 °

Well: Little Bear 7 Fee #2H

Well Position: +N/-S 0 00 ft Northing: 738,981 40 ft Latitude: 33° 1' 32 665 N
+E/-W 0 00 ft Easting: 907,299 90 ft Longitude: 103° 8' 21 557 W
Position Uncertainty: 0 00 ft Wellhead Elevation: ft Ground Level: 0 00 ft

Wellbore: Lateral

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/10/2007	7 87	61 11	49,539

Design: Plan #1

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 9,226 00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0 00	0 00	359 34

Survey Tool Program: Date: 10/10/2007

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
9,226 00	11,215 29	Plan #1 (Lateral)	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)
9,226 01	0 00	0 00	9,226 01	0 00	0 00	0 00	0 00	0 00	0 00
KOP - Build 30.0° / 100									
9,230 00	1 20	359 34	9,230 00	0 04	0 00	0 04	30 00	30 00	0 00
9,240 00	4 20	359 34	9,239 99	0 51	-0 01	0 51	30 00	30 00	0 00
9,250 00	7 20	359 34	9,249 94	1 50	-0 02	1 50	30 00	30 00	0 00
9,260 00	10 20	359 34	9,259 82	3 02	-0 03	3 02	30 00	30 00	0 00
9,270 00	13 20	359 34	9,269 61	5 04	-0 06	5 04	30 00	30 00	0 00
9,280 00	16 20	359 34	9,279 28	7 58	-0 09	7 58	30 00	30 00	0 00
9,290 00	19 20	359 34	9,288 81	10 62	-0 12	10 62	30 00	30 00	0 00
9,300 00	22 20	359 34	9,298 16	14 15	-0 16	14 15	30 00	30 00	0 00
9,310 00	25 20	359 34	9,307 32	18 17	-0 21	18 17	30 00	30 00	0 00
9,320 00	28 20	359 34	9,316 25	22 66	-0 26	22 66	30 00	30 00	0 00
9,330 00	31 20	359 34	9,324 94	27 61	-0 32	27 62	30 00	30 00	0 00



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North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.14 1 0 Server DB

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)
9,340 00	34 20	359 34	9,333 35	33 02	-0 38	33 02	30 00	30 00	0 00
9,350 00	37 20	359 34	9,341 47	38 85	-0 45	38 85	30 00	30 00	0 00
9,360 00	40 20	359 34	9,349 28	45 10	-0 52	45 10	30 00	30 00	0 00
9,370 00	43 20	359 34	9,356 74	51 75	-0 60	51 75	30 00	30 00	0 00
9,380 00	46 20	359 34	9,363 85	58 78	-0 68	58 79	30 00	30 00	0 00
9,390 00	49 20	359 34	9,370 58	66 18	-0 76	66 18	30 00	30 00	0 00
9,400 00	52 20	359 34	9,376 91	73 91	-0 85	73 92	30 00	30 00	0 00
9,410 00	55 20	359 34	9,382 83	81 97	-0 94	81 98	30 00	30 00	0 00
9,417 51	57 45	359 34	9,387 00	88 22	-1 02	88 23	30 00	30 00	0 00
Wolfcamp									
9,420 00	58 20	359 34	9,388 32	90 33	-1 04	90 33	30 00	30 00	0 00
9,430 00	61 20	359 34	9,393 37	98 96	-1 14	98 97	30 00	30 00	0 00
9,440 00	64 20	359 34	9,397 96	107 84	-1 24	107 85	30 00	30 00	0 00
9,450 00	67 20	359 34	9,402 07	116 96	-1 35	116 96	30 00	30 00	0 00
9,460 00	70 20	359 34	9,405 70	126 27	-1 46	126 28	30 00	30 00	0 00
9,470 00	73 20	359 34	9,408 84	135 76	-1 56	135 77	30 00	30 00	0 00
9,480 00	76 20	359 34	9,411 48	145 41	-1 68	145 42	30 00	30 00	0 00
9,490 00	79 20	359 34	9,413 61	155 17	-1 79	155 19	30 00	30 00	0 00
9,500 00	82 20	359 34	9,415 23	165 04	-1 90	165 05	30 00	30 00	0 00
9,510 00	85 20	359 34	9,416 33	174 98	-2 02	174 99	30 00	30 00	0 00
9,520 00	88 20	359 34	9,416 91	184 96	-2 13	184 97	30 00	30 00	0 00
9,526 01	90 00	359 34	9,417 00	190 97	-2 20	190 99	30 00	30 00	0 00
EOC - Hold 90.0° Inc. :: 359.34° Azi.									
9,600 00	90 00	359 34	9,417 00	264 95	-3 05	264 97	0 00	0 00	0 00
9,700 00	90 00	359 34	9,417 00	364 95	-4 21	364 97	0 00	0 00	0 00
9,800 00	90 00	359 34	9,417 00	464 94	-5 36	464 97	0 00	0 00	0 00
9,900 00	90 00	359 34	9,417 00	564 93	-6 51	564 97	0 00	0 00	0 00
10,000 00	90 00	359 34	9,417 00	664 93	-7 66	664 97	0 00	0 00	0 00
10,100 00	90 00	359 34	9,417 00	764 92	-8 82	764 97	0 00	0 00	0 00
10,200 00	90 00	359 34	9,417 00	864 91	-9 97	864 97	0 00	0 00	0 00
10,300 00	90 00	359 34	9,417 00	964 91	-11 12	964 97	0 00	0 00	0 00
10,400 00	90 00	359 34	9,417 00	1,064 90	-12 27	1,064 97	0 00	0 00	0 00
10,500 00	90 00	359 34	9,417 00	1,164 89	-13 43	1,164 97	0 00	0 00	0 00
10,600 00	90 00	359 34	9,417 00	1,264 89	-14 58	1,264 97	0 00	0 00	0 00
10,700 00	90 00	359 34	9,417 00	1,364 88	-15 73	1,364 97	0 00	0 00	0 00
10,800 00	90 00	359 34	9,417 00	1,464 87	-16 88	1,464 97	0 00	0 00	0 00
10,900 00	90 00	359 34	9,417 00	1,564 87	-18 04	1,564 97	0 00	0 00	0 00
11,000 00	90 00	359 34	9,417 00	1,664 86	-19 19	1,664 97	0 00	0 00	0 00
11,100 00	90 00	359 34	9,417 00	1,764 85	-20 34	1,764 97	0 00	0 00	0 00
11,200 00	90 00	359 34	9,417 00	1,864 85	-21 49	1,864 97	0 00	0 00	0 00
11,215 29	90 00	359 34	9,417 00	1,880 14	-21 67	1,880 26	0 00	0 00	0 00

PBHL#1[LB7Fee2H]



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Survey Report



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Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL#1[LB7Fee2H] - plan hits target - Point	0 00	0 00	9,417 00	1,880 14	-21 67	740,861.54	907,278 23	33° 1' 51 267 N	103° 8' 21 560 W

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
9,417 51	9,387 00	Wolfcamp		0 00	
	9,667 00	Wolfcamp B		0 00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
9,226 01	9,226 01	0 00	0 00	KOP - Build 30 0° / 100
9,526 01	9,417 00	190 97	-2 20	EOC - Hold 90 0° Inc 359 34° Azi

Checked By: _____ Approved By: _____ Date: _____