

Proposed



Cimarex Energy Co., Inc.

Lea Co, New Mexico

Crestone #1

Crestone #1

Plan #1

Plan: Plan #1

Standard Survey Report

11 April, 2006





Black Viper Energy Services
Survey Report

Proposed



Company: Cimarex Energy Co., Inc.
Project: Lea Co, New Mexico
Site: Crestone #1
Well: Crestone #1
Wellbore: Plan #1
Design: Plan #1

Local Co-ordinate Reference: Well Crestone #1
TVD Reference: WELL @ 0.00ft (Original Well Elev)
MD Reference: WELL @ 0.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.11 Server Db

Project Lea Co, New Mexico

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Ground Level

Site Crestone #1

Site Position:
From: Lat/Long
Position Uncertainty: 0.00 ft

Northing: 746,432.02 ft
Easting: 858,551.55 ft
Slot Radius: "

Latitude: 33° 02' 47.436" N
Longitude: 103° 09' 47.700" W
Grid Convergence: 0.64 °

Well Crestone #1

Well Position +N/-S 0.00 ft
+E/-W 0.00 ft
Position Uncertainty 0.00 ft

Northing: 746,432.02 ft
Easting: 858,551.55 ft
Wellhead Elevation: ft

Latitude: 33° 02' 47.436" N
Longitude: 103° 09' 47.700" W
Ground Level: 0.00 ft

Wellbore Plan #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/11/2006	8.07	61.16	49,724

Design Plan #1

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 9,095.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	0.00

Survey Tool Program Date 4/11/2006

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	9,095.00	Plan #1 (OH)	MWD	Standard MWD
9,095.00	11,175.73	Plan #1 (Plan #1)		

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)
9,095.00	0.00	0.00	9,095.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Window 9,102.80	3.00	0.00	9,102.80	0.20	0.00	0.20	38.46	38.46	0.00
Btm of Window 9,149.08	3.00	360.00	9,149.01	2.63	0.00	2.63	0.00	0.00	0.00
KOP - Build 30°/100 9,439.08	90.00	360.00	9,330.00	193.35	0.00	193.35	30.00	30.00	0.00
EOC - Hold 90° to TD 11,175.73	90.00	360.00	9,330.00	1,930.00	0.00	1,930.00	0.00	0.00	0.00



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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
- Shape									
PBHL #1 [C#1]	0.00	0.00	9,330.00	1,930.00	0.00	748,361.90	858,530.05	33° 03' 06.531" N	103° 09' 47.700" W
- plan misses by 1736.65ft at 9439.08ft MD (9330.00 TVD, 193.35 N, 0.00 E)									
- Point									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
9,095.00	9,095.00	0.00	0.00	Top of Window
9,102.80	9,102.80	0.20	0.00	Btm of Window
9,149.08	9,149.01	2.63	0.00	KOP - Build 30"/100
9,439.08	9,330.00	193.35	0.00	EOC - Hold 90° to TD

Checked By: _____ Approved By: _____ Date: _____