

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
March 12, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: Cimarex Energy Co. Telephone: 972-443-6489 e-mail address: zfarris@cimarex.com
Address: P.O. Box 140907, Irving, TX 75014-0907
Facility or well name: Caudill South 21 Fee No. 21 API #: 30-025-37925 U/L or Qtr/Qtr: Sec 21 T15S R36E
County: Lea Latitude 330004.5 N Longitude 1031852.5 W NAD: 1927 ☐ 1983 ☒ Surface Owner Federal ☐ State ☐ Private ☒ Indian ☐

Pit	Below-grade tank
Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type: Synthetic ☒ Thickness 12 mil Clay ☐ Volume bbl Closed system cuttings to hauled	Volume: bbl Type of fluid: Construction material: Double-walled, with leak detection? Yes ☐ If not, explain why not.
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) 100 feet or more (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) No (0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) 1000 feet or more (0 points)
Ranking Score (Total Points) 10	

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: onsite ☐ offsite ☐ If offsite, name of facility (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface, ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒ a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

Date: 06-07-06

Printed Name/Title Zene Farris Manager Operations Administration

Signature

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Date: JUN 09 2006

Printed Name/Title

PETROLEUM ENGINEER

Signature

Cimarex Energy Co., Inc.
Caudill South 21 Fee #2H - Plan #2

Lea County (NAD 83)
Caudill South 21 Fee #2H

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	0.00
10476.10	0.000	0.000	10476.10	0.00 N	0.00 E	0.00	0.00
10480.00	1.170	0.000	10480.00	0.04 N	0.00 E	0.04	30.00
10490.00	4.169	0.000	10489.99	0.51 N	0.00 E	0.51	30.00
10500.00	7.169	0.000	10499.94	1.49 N	0.00 E	1.49	30.00
10510.00	10.168	0.000	10509.82	3.00 N	0.00 E	3.00	30.00
10520.00	13.168	0.000	10519.61	5.02 N	0.00 E	5.02	30.00
10530.00	16.167	0.000	10529.29	7.55 N	0.00 E	7.55	30.00
10540.00	19.167	0.000	10538.81	10.59 N	0.00 E	10.59	30.00
10550.00	22.166	0.000	10548.17	14.12 N	0.00 E	14.12	30.00
10560.00	25.166	0.000	10557.33	18.13 N	0.00 E	18.13	30.00
10570.00	28.166	0.000	10566.26	22.62 N	0.00 E	22.62	30.00
10580.00	31.165	0.000	10574.95	27.57 N	0.00 E	27.57	30.00
10590.00	34.165	0.000	10583.37	32.96 N	0.00 E	32.96	30.00
10600.00	37.164	0.000	10591.49	38.79 N	0.00 E	38.79	30.00
10610.00	40.164	0.000	10599.30	45.04 N	0.00 E	45.04	30.00
10620.00	43.163	0.000	10606.77	51.69 N	0.00 E	51.69	30.00
10630.00	46.163	0.000	10613.88	58.72 N	0.00 E	58.72	30.00
10640.00	49.162	0.000	10620.62	66.11 N	0.00 E	66.11	30.00
10650.00	52.162	0.000	10626.95	73.84 N	0.00 E	73.84	30.00
10660.00	55.161	0.000	10632.88	81.89 N	0.00 E	81.89	30.00
10670.00	58.161	0.000	10638.37	90.25 N	0.00 E	90.25	30.00
10680.00	61.160	0.000	10643.43	98.88 N	0.00 E	98.88	30.00
10690.00	64.160	0.000	10648.02	107.76 N	0.00 E	107.76	30.00
10700.00	67.159	0.000	10652.14	116.87 N	0.00 E	116.87	30.00
10710.00	70.159	0.000	10655.78	126.18 N	0.00 E	126.18	30.00
10720.00	73.158	0.000	10658.92	135.67 N	0.00 E	135.67	30.00
10730.00	76.158	0.000	10661.57	145.32 N	0.00 E	145.32	30.00
10740.00	79.157	0.000	10663.71	155.08 N	0.00 E	155.08	30.00
10750.00	82.157	0.000	10665.33	164.95 N	0.00 E	164.95	30.00
10760.00	85.156	0.000	10666.43	174.89 N	0.00 E	174.89	30.00
10770.00	88.156	0.000	10667.02	184.87 N	0.00 E	184.87	30.00
10780.00	91.155	0.000	10667.08	194.87 N	0.00 E	194.87	30.00
10782.82	92.000	0.000	10667.00	197.68 N	0.00 E	197.68	30.00
10800.00	92.000	0.000	10666.40	214.86 N	0.00 E	214.86	0.00
10900.00	92.000	0.000	10662.91	314.80 N	0.00 E	314.80	0.00
11000.00	92.000	0.000	10659.42	414.73 N	0.00 E	414.73	0.00
11100.00	92.000	0.000	10655.93	514.67 N	0.00 E	514.67	0.00
11200.00	92.000	0.000	10652.44	614.61 N	0.00 E	614.61	0.00
11300.00	92.000	0.000	10648.95	714.55 N	0.00 E	714.55	0.00
11400.00	92.000	0.000	10645.46	814.49 N	0.00 E	814.49	0.00
11500.00	92.000	0.000	10641.97	914.43 N	0.00 E	914.43	0.00
11600.00	92.000	0.000	10638.48	1014.37 N	0.00 E	1014.37	0.00
11700.00	92.000	0.000	10634.99	1114.31 N	0.00 E	1114.31	0.00
11800.00	92.000	0.000	10631.50	1214.25 N	0.00 E	1214.25	0.00
11900.00	92.000	0.000	10628.01	1314.19 N	0.00 E	1314.19	0.00
12000.00	92.000	0.000	10624.52	1414.13 N	0.00 E	1414.13	0.00
12100.00	92.000	0.000	10621.03	1514.06 N	0.00 E	1514.06	0.00
12200.00	92.000	0.000	10617.54	1614.00 N	0.00 E	1614.00	0.00
12216.01	92.000	0.000	10616.98	1630.00 N	0.00 E	1630.00	0.00

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid No

<https://webmail.state.nm.us/exchange/dmull/Inbox/Directional%20&%20C-144%20Caudill%20South%20...> 6/8/2006

Vertical depths are relative to WELL. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from Slot and calculated along an Azimuth of 0.000° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.

Central meridian is -104.333°.

Grid Convergence at Surface is 0.555°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 12216.01ft., the Bottom Hole Displacement is 1630.00ft., in the Direction of 0.000° (Grid).



Project: Lea County (NAD 83)
Site: Caudill South 21 Fee #2H
Well: Caudill South 21 Fee #2H
Wellbore: Lateral #1
Plan: Plan #2 (Caudill South 21 Fee #2H/Lateral #1)

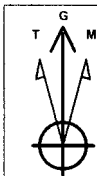


PROJECT DETAILS: Lea County (NAD 83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

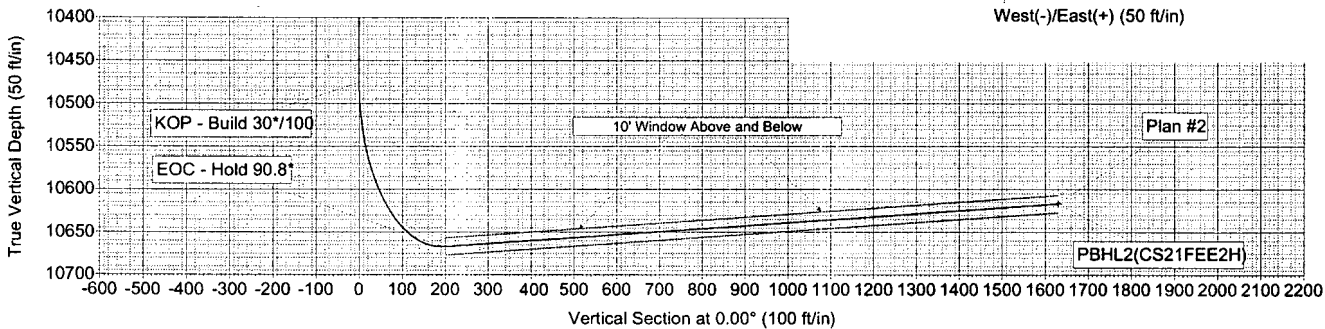
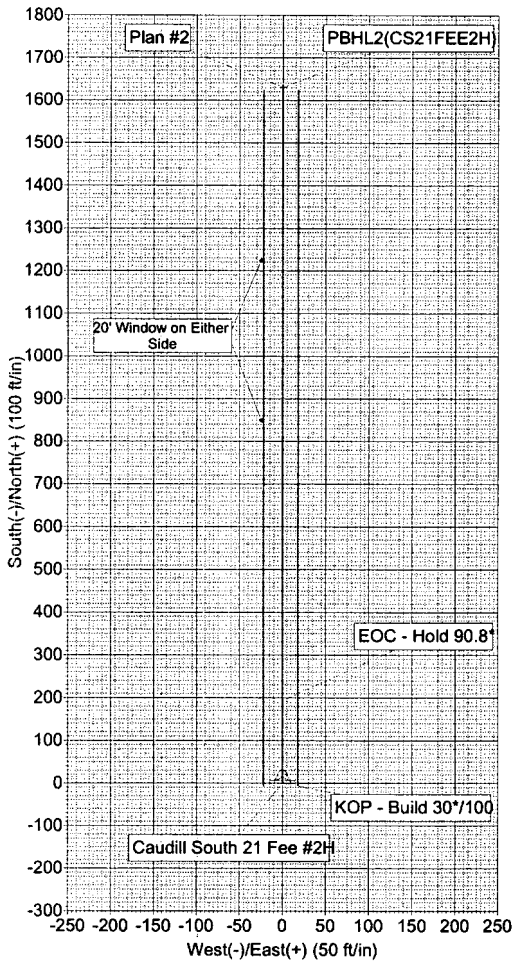
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	10476.10	0.00	0.00	10476.10	0.00	0.00	0.00	0.00	0.00	
3	10782.82	92.00	0.00	10667.00	197.68	0.00	30.00	0.00	197.68	
4	12216.01	92.00	0.00	10616.98	1630.00	0.00	0.00	0.00	1630.00	PBHL2(CS21FEE2H)

ANNOTATIONS
TVD MD Annotation
10476.00 10476.00 KOP - Build 30°/100
10667.10 10778.72 EOC - Hold 90.8°



Azimuths to Grid North
True North: -0.55°
Magnetic North: 7.56°
Magnetic Field
Strength: 49665.7nT
Dip Angle: 61.09°
Date: 6/6/2008
Model: IGRF200510



Plan: Plan #2 (Caudill South 21 Fee #2H/Lateral #1)
Created By: Tim LeMoine Date: 06/07/2008

Cimarex Energy Co., Inc.

Lea County (NAD 83)

Caudill South 21 Fee #2H

Caudill South 21 Fee #2H

Lateral #1

Plan: Plan #2

Standard Survey Report

07 June, 2006

Black Viper Energy
Survey Report

Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Site Caudill South 21 Fee #2H
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	Caudill South 21 Fee #2H	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Well:	Caudill South 21 Fee #2H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 2003.14.1.0 Server DB

Project	Lea County (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Caudill South 21 Fee #2H				
Site Position:		Northing:	729,498.40 ft	Latitude:	33° 0' 4.433 N
From:	Map	Easting:	853,664.79 ft	Longitude:	103° 18' 52.520 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.55 °

Well	Caudill South 21 Fee #2H					
Well Position	+N/-S	0.00 ft	Northing:	729,498.40 ft	Latitude:	33° 0' 4.433 N
	+E/-W	0.00 ft	Easting:	853,664.79 ft	Longitude:	103° 18' 52.520 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
	IGRF200510	6/6/2006	(°)	(°)	(nT)
			8.12	61.09	49,666

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	0.00

Survey Tool Program	Date	6/7/2006		
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
0.00	12,215.59	Plan #2 (Lateral #1)	MWD	Standard MWD

Planned Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00

Black Viper Energy
Survey Report

Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Site Caudill South:21 Fee #2H
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	Caudill South 21 Fee #2H	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Well:	Caudill South 21 Fee #2H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	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)	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00	

Black Viper Energy
Survey Report

Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Site Caudill South 21 Fee #2H
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	Caudill South 21 Fee #2H	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Well:	Caudill South 21 Fee #2H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	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)
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00
10,476.00	0.00	0.00	10,476.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Build 30°/100									
10,476.10	0.00	0.00	10,476.10	0.00	0.00	0.00	0.00	0.00	0.00
10,500.00	7.17	0.00	10,499.94	1.49	0.00	1.49	30.00	30.00	0.00
10,600.00	37.16	0.00	10,591.49	38.79	0.00	38.79	30.00	30.00	0.00
10,700.00	67.16	0.00	10,652.14	116.87	0.00	116.87	30.00	30.00	0.00
10,778.72	90.77	0.00	10,667.10	193.59	0.00	193.59	30.00	30.00	0.00
EOC - Hold 90.8°									
10,782.82	92.00	0.00	10,667.00	197.68	0.00	197.68	30.00	30.00	0.00
10,800.00	92.00	0.00	10,666.40	214.86	0.00	214.86	0.00	0.00	0.00
10,900.00	92.00	0.00	10,662.91	314.80	0.00	314.80	0.00	0.00	0.00
11,000.00	92.00	0.00	10,659.42	414.73	0.00	414.73	0.00	0.00	0.00
11,100.00	92.00	0.00	10,655.93	514.67	0.00	514.67	0.00	0.00	0.00
11,200.00	92.00	0.00	10,652.44	614.61	0.00	614.61	0.00	0.00	0.00
11,300.00	92.00	0.00	10,648.95	714.55	0.00	714.55	0.00	0.00	0.00
11,400.00	92.00	0.00	10,645.46	814.49	0.00	814.49	0.00	0.00	0.00

Black Viper Energy
Survey Report

Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Site Caudill South 21 Fee #2H
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	Caudill South 21 Fee #2H	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Well:	Caudill South 21 Fee #2H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	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)	
11,500.00	92.00	0.00	10,641.97	914.43	0.00	914.43	0.00	0.00	0.00	
11,600.00	92.00	0.00	10,638.48	1,014.37	0.00	1,014.37	0.00	0.00	0.00	
11,700.00	92.00	0.00	10,634.99	1,114.31	0.00	1,114.31	0.00	0.00	0.00	
11,800.00	92.00	0.00	10,631.50	1,214.25	0.00	1,214.25	0.00	0.00	0.00	
11,900.00	92.00	0.00	10,628.01	1,314.19	0.00	1,314.19	0.00	0.00	0.00	
12,000.00	92.00	0.00	10,624.52	1,414.13	0.00	1,414.13	0.00	0.00	0.00	
12,100.00	92.00	0.00	10,621.03	1,514.06	0.00	1,514.06	0.00	0.00	0.00	
12,200.00	92.00	0.00	10,617.54	1,614.00	0.00	1,614.00	0.00	0.00	0.00	
12,216.01	92.00	0.00	10,616.98	1,630.00	0.00	1,630.00	0.00	0.00	0.00	

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(CS21FEE2H)	0.00	359.55	10,617.00	-187,898.82	-54,786.78	541,599.58	798,878.01	32° 29' 10.121 N	103° 29' 53.182 W
- plan hits target									
- Point									
PBHL2(CS21FEE2H)	0.00	359.55	10,617.00	1,630.00	0.00	731,128.40	853,664.79	33° 0' 20.559 N	103° 18' 52.334 W
- plan hits target									
- Point									

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
10,476.00	10,476.00	0.00	0.00	KOP - Build 30°/100	
10,778.72	10,667.10	193.63	0.00	EOC - Hold 90.8°	

Checked By:	_____	Approved By:	_____	Date:	_____
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