

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
June 1, 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. of Colorado Telephone: 972-401-3111 e-mail address: zfarris@cimarex.com
Address: PO Box 140907, Irving, TX 75014-0907
Facility or well name: Yorktown 12 Fee 1 API #: 30-005-28004 U/L or Qtr/Qtr D Sec 12 T 15S R 31E
County: Chaves Latitude 33.036613 N Longitude 103.782127 W NAD: 1927 ☒ 1983 ☐
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐

Pit Type: Drilling ☒ Production ☐ Disposal ☐ Workover: ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type: Synthetic ☒ Thickness <u>12</u> mil Clay ☐ Pit Volume <u> </u> bbl closed system, cuttings buried	Below-grade tank Volume: <u> </u> bbl Type of fluid: <u> </u> Construction material: <u> </u> Double-walled, with leak detection? Yes ☐ If not, explain why not: <u> </u>						
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) <u>228'</u>	<table border="1"><tr><td>Less than 50 feet</td><td>(20 points)</td></tr><tr><td>50 feet or more, but less than 100 feet</td><td>(10 points)</td></tr><tr><td><u>100 feet or more</u></td><td><u>(0 points)</u></td></tr></table>	Less than 50 feet	(20 points)	50 feet or more, but less than 100 feet	(10 points)	<u>100 feet or more</u>	<u>(0 points)</u>
Less than 50 feet	(20 points)						
50 feet or more, but less than 100 feet	(10 points)						
<u>100 feet or more</u>	<u>(0 points)</u>						
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	<table border="1"><tr><td>Yes</td><td>(20 points)</td></tr><tr><td><u>No</u></td><td><u>(0 points)</u></td></tr></table>	Yes	(20 points)	<u>No</u>	<u>(0 points)</u>		
Yes	(20 points)						
<u>No</u>	<u>(0 points)</u>						
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	<table border="1"><tr><td>Less than 200 feet</td><td>(20 points)</td></tr><tr><td>200 feet or more, but less than 1000 feet</td><td>(10 points)</td></tr><tr><td><u>1000 feet or more</u></td><td><u>(0 points)</u></td></tr></table>	Less than 200 feet	(20 points)	200 feet or more, but less than 1000 feet	(10 points)	<u>1000 feet or more</u>	<u>(0 points)</u>
Less than 200 feet	(20 points)						
200 feet or more, but less than 1000 feet	(10 points)						
<u>1000 feet or more</u>	<u>(0 points)</u>						
Ranking Score (Total Points) <u>0</u>							

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: (check the onsite box if you are burying in place) 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.

Additional Comments:

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: 12.17.07

Printed Name/Title Zeno Farris - Manager Operations Administration Signature Zeno Farris

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:

Printed Name/Title CHRIS WILLIAMS / DIST. SUPV.

Signature Chris Williams

Date: 1/4/08

DISTRICT I
1025 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1331 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

LI AMENDED REPORT

API Number 30-005-28004	Pool Code 60615	Pool Name Tulk; Wolfcamp, Southwest
Property Code 36907	Property Name YORKTOWN 12 FEE	Well Number 1
GRID No 162683	Operator Name CIMAREX ENERGY COMPANY OF COLORADO	Elevation 4384'

Surface Location

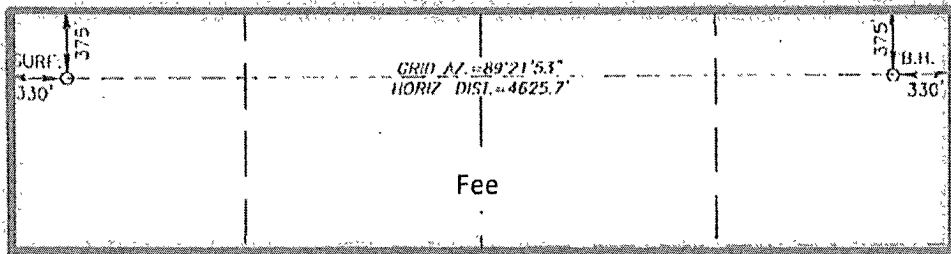
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	12	15-S	31-E		375	NORTH	330	WEST	CHAVES

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	12	15-S	31-E		375	NORTH	330	EAST	CHAVES

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

 GRID AZ = 89°21'53" HORIZ DIST = 4625.7' Fee Bottom Hole Location Y = 741276.0 N X = 668921.9 E Y = 741327.2 N X = 673546.2 E GEODETIC COORDINATES NAD 27 NMF SURFACE LOCATION Y = 741276.0 N X = 668921.9 E LAT = 33.036613° N LONG = 103.782127° W	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unless mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Zeno Farris</i> 12-17-07 Signature Date Zeno Farris Printed Name SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. NOVEMBER 14, 2007 Date Surveyed Signature & Seal of Professional Surveyor <i>Ronald J. Eidson</i> 12/05/07 07.11.1597 Certificate No. GARY EIDSON 12041 RONALD J. EIDSON 3230
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Cimarex Energy Co. of Colorado

5215 North O'Connor Blvd. ♦ Suite 1500 ♦ Irving, TX 75039 ♦ (972) 401-3111 ♦ Fax (972) 443-6486

Mailing Address: P.O. Box 140907 ♦ Irving, TX 75014-0907

A subsidiary of Cimarex Energy Co. • A NYSE Listed Company • "XEC"

30.005-28004

December 17, 2007

Oil Conservation Division
District II Office
1301 W. Grand Ave.
Artesia, New Mexico 88210
Attn: Mr. Bryan Arrant

Re: Statewide Rule 118
Hydrogen Sulfide Gas Contingency Plan
Proposed Yorktown 12 Fee No. 1 Well

Dear Mr. Arrant:

In accordance with NMAC 19.15.3.118 C. (1) governing the determination of the hydrogen sulfide concentration in gaseous mixtures in each of its operations, Cimarex Energy Co. of Colorado does not anticipate that there will be enough H₂S from the surface to the Wolfcamp formations to meet the OCD's minimum requirements for the submission of a contingency plan for the drilling and completion of the following test(s):

Yorktown 12 Fee No. 1
12-15S-31E
SHL 375' FNL & 330' FWL
BHL 375' FNL & 330' FEL
Chaves County, NM

If anything further is needed regarding this issue, or if you have any questions, please feel free to contact the undersigned at 972-443-6489.

Yours truly,

Zeno Farris
Manager, Operations Administration



Project Chaves Co, New Mexico
 Site Yorktown 12 Fee #2H
 Well Yorktown 12 Fee #2H
 Wellbore Lateral #1
 Plan Plan #1 (Yorktown 12 Fee #2H/Lateral #1)

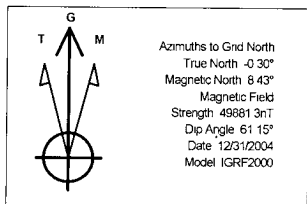
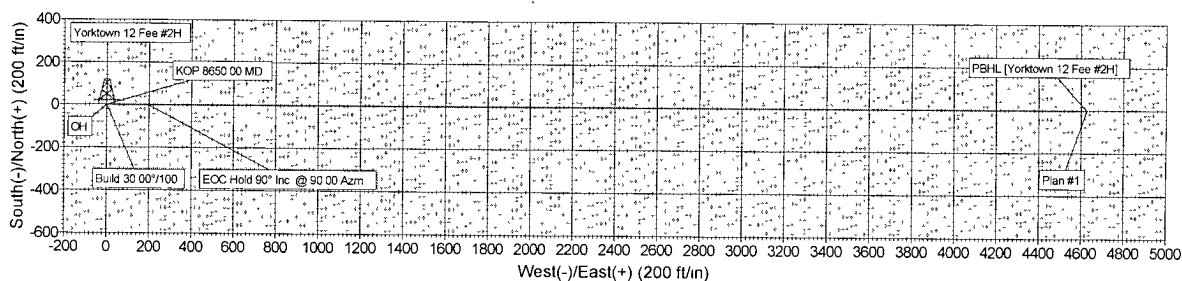


30-005-28004

PROJECT DETAILS Chaves Co, New Mexico
 Geodetic System US State Plane 1927 (Exact solution)
 Datum NAD 1927 (NADCON CONUS)
 Ellipsoid Clarke 1866
 Zone New Mexico East 3001
 System Datum Mean Sea Level

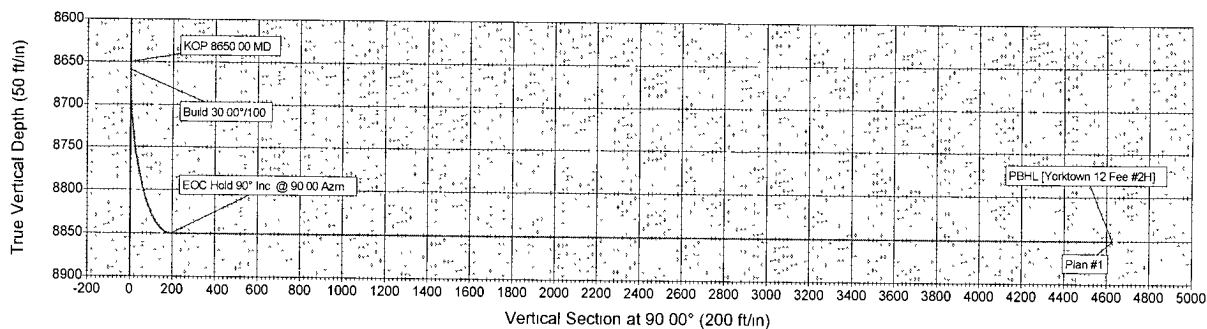
ANNOTATIONS

TVD	MD	Annotation
8650 00	8650 00	KOP 8650 00 MD
8659 01	8659 01	Build 30 00°/100
8850 00	8959 01	EOC Hold 90° Inc @ 90 00 Azm



SECTION DETAILS

Sec	MD	Inc	Azu	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	8650 00	0 00	0 00	8650 00	0 00	0 00	0 00	0 00	0 00	
2	8659 01	0 00	0 00	8659 01	0 00	0 00	0 00	0 00	0 00	
3	8959 01	90 00	90 00	8850 00	0 00	190 99	30 00	90 00	0 00	
4	13394 23	90 00	90 00	8850 00	0 00	4626 20	0 00	0 00	0 00	PBHL [Yorktown 12 Fee #2H]



Plan Plan #1 (Yorktown 12 Fee #2H/Lateral #1)
 Created By Heather Vannoy Date December 12 2007

30-005-28004

Cimarex Energy Co., Inc.

Chaves Co., New Mexico

Yorktown 12 Fee #2H

Yorktown 12 Fee #2H

Lateral #1

Plan: Plan #1

Standard Survey Report

12 December, 2007

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc	Local Co-ordinate Reference:	Well Yorktown 12 Fee #2H
Project:	Chaves Co., New Mexico	TVD Reference:	WELL @ 4384 00ft (Original Well Elev)
Site:	Yorktown 12 Fee #2H	MD Reference:	WELL @ 4384 00ft (Original Well Elev)
Well:	Yorktown 12 Fee #2H	North Reference:	Gnd
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003.14 Server Db

Project	Chaves Co., New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Yorktown 12 Fee #2H		
Site Position:		Northing:	739,671 40 ft
From:	Map	Easting:	668,930 40 ft
Position Uncertainty:	0 00 ft	Slot Radius:	"
		Latitude:	33° 1' 55 913 N
		Longitude:	103° 46' 55 672 W
		Grid Convergence:	0 30 °

Well	Yorktown 12 Fee #2H		
Well Position	+N/-S	0 00 ft	Northing: 739,671 40 ft
	+E/-W	0 00 ft	Easting: 668,930 40 ft
Position Uncertainty	0 00 ft	Wellhead Elevation:	ft
		Latitude:	33° 1' 55 913 N
		Longitude:	103° 46' 55 672 W
		Ground Level:	0 00 ft

Wellbore	Lateral #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2000	12/31/2004	(°)
			8 73
			Dip Angle
			(°)
			61 15
			Field Strength
			(nT)
			49,881

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 8,650 00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0 00	0 00	0 00
			Direction
			(°)
			90 00

Survey Tool Program	Date 12/12/2007		
From	To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
8,650 00	13,394 23	Plan #1 (Lateral #1)	MWD
			Description
			MWD - Standard

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)	
8,650 00	0 00	0 00	8,650 00	0 00	0 00	0 00	0 00	0 00	0 00	
KOP 8650.00 MD										
8,659 01	0 00	0 00	8,659 01	0 00	0 00	0 00	0 00	0 00	0 00	
Build 30.00°/100										
8,670 00	3 30	90 00	8,669 99	0 00	0 32	0 32	30 00	30 00	0 00	
8,700 00	12 30	90 00	8,699 69	0 00	4 38	4 38	30 00	30 00	0 00	
8,730 00	21 30	90 00	8,728 38	0 00	13 04	13 04	30 00	30 00	0 00	
8,760 00	30 30	90 00	8,755 36	0 00	26 08	26 08	30 00	30 00	0 00	
8,790 00	39 30	90 00	8,779 97	0 00	43 18	43 18	30 00	30 00	0 00	
8,820 00	48 30	90 00	8,801 60	0 00	63 93	63 93	30 00	30 00	0 00	
8,850 00	57 30	90 00	8,819 72	0 00	87 80	87 80	30 00	30 00	0 00	
8,880 00	66 30	90 00	8,833 89	0 00	114 21	114 21	30 00	30 00	0 00	
8,910 00	75 30	90 00	8,843 74	0 00	142 51	142 51	30 00	30 00	0 00	

Black Viper Energy

Survey Report

Company: Cimarex Energy Co., Inc.
Project: Chaves Co., New Mexico
Site: Yorktown 12 Fee #2H
Well: Yorktown 12 Fee #2H
Wellbore: Lateral #1
Design: Plan #1

Local Co-ordinate Reference: Well, Yorktown 12 Fee #2H
TVD Reference: WELL @ 4384.00ft (Original Well Elev)
MD Reference: WELL @ 4384.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 14, 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)
8,940.00	84.30	90.00	8,849.05	0.00	172.00	172.00	30.00	30.00	0.00
8,959.01	90.00	90.00	8,850.00	0.00	190.99	190.99	30.00	30.00	0.00
EOC Hold 90° Inc. @ 90.00 Azm									
8,970.00	90.00	90.00	8,850.00	0.00	201.97	201.97	0.00	0.00	0.00
9,000.00	90.00	90.00	8,850.00	0.00	231.97	231.97	0.00	0.00	0.00
9,030.00	90.00	90.00	8,850.00	0.00	261.97	261.97	0.00	0.00	0.00
9,060.00	90.00	90.00	8,850.00	0.00	291.97	291.97	0.00	0.00	0.00
9,090.00	90.00	90.00	8,850.00	0.00	321.97	321.97	0.00	0.00	0.00
9,120.00	90.00	90.00	8,850.00	0.00	351.97	351.97	0.00	0.00	0.00
9,150.00	90.00	90.00	8,850.00	0.00	381.97	381.97	0.00	0.00	0.00
9,180.00	90.00	90.00	8,850.00	0.00	411.97	411.97	0.00	0.00	0.00
9,210.00	90.00	90.00	8,850.00	0.00	441.97	441.97	0.00	0.00	0.00
9,240.00	90.00	90.00	8,850.00	0.00	471.97	471.97	0.00	0.00	0.00
9,270.00	90.00	90.00	8,850.00	0.00	501.97	501.97	0.00	0.00	0.00
9,300.00	90.00	90.00	8,850.00	0.00	531.97	531.97	0.00	0.00	0.00
9,330.00	90.00	90.00	8,850.00	0.00	561.97	561.97	0.00	0.00	0.00
9,360.00	90.00	90.00	8,850.00	0.00	591.97	591.97	0.00	0.00	0.00
9,390.00	90.00	90.00	8,850.00	0.00	621.97	621.97	0.00	0.00	0.00
9,420.00	90.00	90.00	8,850.00	0.00	651.97	651.97	0.00	0.00	0.00
9,450.00	90.00	90.00	8,850.00	0.00	681.97	681.97	0.00	0.00	0.00
9,480.00	90.00	90.00	8,850.00	0.00	711.97	711.97	0.00	0.00	0.00
9,510.00	90.00	90.00	8,850.00	0.00	741.97	741.97	0.00	0.00	0.00
9,540.00	90.00	90.00	8,850.00	0.00	771.97	771.97	0.00	0.00	0.00
9,570.00	90.00	90.00	8,850.00	0.00	801.97	801.97	0.00	0.00	0.00
9,600.00	90.00	90.00	8,850.00	0.00	831.97	831.97	0.00	0.00	0.00
9,630.00	90.00	90.00	8,850.00	0.00	861.97	861.97	0.00	0.00	0.00
9,660.00	90.00	90.00	8,850.00	0.00	891.97	891.97	0.00	0.00	0.00
9,690.00	90.00	90.00	8,850.00	0.00	921.97	921.97	0.00	0.00	0.00
9,720.00	90.00	90.00	8,850.00	0.00	951.97	951.97	0.00	0.00	0.00
9,750.00	90.00	90.00	8,850.00	0.00	981.97	981.97	0.00	0.00	0.00
9,780.00	90.00	90.00	8,850.00	0.00	1,011.97	1,011.97	0.00	0.00	0.00
9,810.00	90.00	90.00	8,850.00	0.00	1,041.97	1,041.97	0.00	0.00	0.00
9,840.00	90.00	90.00	8,850.00	0.00	1,071.97	1,071.97	0.00	0.00	0.00
9,870.00	90.00	90.00	8,850.00	0.00	1,101.97	1,101.97	0.00	0.00	0.00
9,900.00	90.00	90.00	8,850.00	0.00	1,131.97	1,131.97	0.00	0.00	0.00
9,930.00	90.00	90.00	8,850.00	0.00	1,161.97	1,161.97	0.00	0.00	0.00
9,960.00	90.00	90.00	8,850.00	0.00	1,191.97	1,191.97	0.00	0.00	0.00
9,990.00	90.00	90.00	8,850.00	0.00	1,221.97	1,221.97	0.00	0.00	0.00
10,020.00	90.00	90.00	8,850.00	0.00	1,251.97	1,251.97	0.00	0.00	0.00
10,050.00	90.00	90.00	8,850.00	0.00	1,281.97	1,281.97	0.00	0.00	0.00
10,080.00	90.00	90.00	8,850.00	0.00	1,311.97	1,311.97	0.00	0.00	0.00
10,110.00	90.00	90.00	8,850.00	0.00	1,341.97	1,341.97	0.00	0.00	0.00
10,140.00	90.00	90.00	8,850.00	0.00	1,371.97	1,371.97	0.00	0.00	0.00
10,170.00	90.00	90.00	8,850.00	0.00	1,401.97	1,401.97	0.00	0.00	0.00
10,200.00	90.00	90.00	8,850.00	0.00	1,431.97	1,431.97	0.00	0.00	0.00
10,230.00	90.00	90.00	8,850.00	0.00	1,461.97	1,461.97	0.00	0.00	0.00
10,260.00	90.00	90.00	8,850.00	0.00	1,491.97	1,491.97	0.00	0.00	0.00
10,290.00	90.00	90.00	8,850.00	0.00	1,521.97	1,521.97	0.00	0.00	0.00
10,320.00	90.00	90.00	8,850.00	0.00	1,551.97	1,551.97	0.00	0.00	0.00
10,350.00	90.00	90.00	8,850.00	0.00	1,581.97	1,581.97	0.00	0.00	0.00
10,380.00	90.00	90.00	8,850.00	0.00	1,611.97	1,611.97	0.00	0.00	0.00
10,410.00	90.00	90.00	8,850.00	0.00	1,641.97	1,641.97	0.00	0.00	0.00
10,440.00	90.00	90.00	8,850.00	0.00	1,671.97	1,671.97	0.00	0.00	0.00
10,470.00	90.00	90.00	8,850.00	0.00	1,701.97	1,701.97	0.00	0.00	0.00
10,500.00	90.00	90.00	8,850.00	0.00	1,731.97	1,731.97	0.00	0.00	0.00

Black Viper Energy

Survey Report

Company: Cimarex Energy Co., Inc
Project: Chaves Co., New Mexico
Site: Yorktown 12 Fee #2H
Well: Yorktown 12 Fee #2H
Wellbore: Lateral #1
Design: Plan #1

Local Co-ordinate Reference: Well Yorktown 12 Fee #2H
TVD Reference: WELL @ 4384 00ft (Original Well Elev)
MD Reference: WELL @ 4384 00ft (Original Well Elev)
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 14 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)
10,530 00	90 00	90 00	8,850 00	0 00	1,761 97	1,761 97	0 00	0 00	0 00
10,560 00	90 00	90 00	8,850 00	0 00	1,791 97	1,791 97	0 00	0 00	0 00
10,590 00	90 00	90 00	8,850 00	0 00	1,821 97	1,821 97	0 00	0 00	0 00
10,620 00	90 00	90 00	8,850 00	0 00	1,851 97	1,851 97	0 00	0 00	0 00
10,650 00	90 00	90 00	8,850 00	0 00	1,881 97	1,881 97	0 00	0 00	0 00
10,680 00	90 00	90 00	8,850 00	0 00	1,911 97	1,911 97	0 00	0 00	0 00
10,710 00	90 00	90 00	8,850 00	0 00	1,941 97	1,941 97	0 00	0 00	0 00
10,740 00	90 00	90 00	8,850 00	0 00	1,971 97	1,971 97	0 00	0 00	0 00
10,770 00	90 00	90 00	8,850 00	0 00	2,001 97	2,001 97	0 00	0 00	0 00
10,800 00	90 00	90 00	8,850 00	0 00	2,031 97	2,031 97	0 00	0 00	0 00
10,830 00	90 00	90 00	8,850 00	0 00	2,061 97	2,061 97	0 00	0 00	0 00
10,860 00	90 00	90 00	8,850 00	0 00	2,091 97	2,091 97	0 00	0 00	0 00
10,890 00	90 00	90 00	8,850 00	0 00	2,121 97	2,121 97	0 00	0 00	0 00
10,920 00	90 00	90 00	8,850 00	0 00	2,151 97	2,151 97	0 00	0 00	0 00
10,950 00	90 00	90 00	8,850 00	0 00	2,181 97	2,181 97	0 00	0 00	0 00
10,980 00	90 00	90 00	8,850 00	0 00	2,211 97	2,211 97	0 00	0 00	0 00
11,010 00	90 00	90 00	8,850 00	0 00	2,241 97	2,241 97	0 00	0 00	0 00
11,040 00	90 00	90 00	8,850 00	0 00	2,271 97	2,271 97	0 00	0 00	0 00
11,070 00	90 00	90 00	8,850 00	0 00	2,301 97	2,301 97	0 00	0 00	0 00
11,100 00	90 00	90 00	8,850 00	0 00	2,331 97	2,331 97	0 00	0 00	0 00
11,130 00	90 00	90 00	8,850 00	0 00	2,361 97	2,361 97	0 00	0 00	0 00
11,160 00	90 00	90 00	8,850 00	0 00	2,391 97	2,391 97	0 00	0 00	0 00
11,190 00	90 00	90 00	8,850 00	0 00	2,421 97	2,421 97	0 00	0 00	0 00
11,220 00	90 00	90 00	8,850 00	0 00	2,451 97	2,451 97	0 00	0 00	0 00
11,250 00	90 00	90 00	8,850 00	0 00	2,481 97	2,481 97	0 00	0 00	0 00
11,280 00	90 00	90 00	8,850 00	0 00	2,511 97	2,511 97	0 00	0 00	0 00
11,310 00	90 00	90 00	8,850 00	0 00	2,541 97	2,541 97	0 00	0 00	0 00
11,340 00	90 00	90 00	8,850 00	0 00	2,571 97	2,571 97	0 00	0 00	0 00
11,370 00	90 00	90 00	8,850 00	0 00	2,601 97	2,601 97	0 00	0 00	0 00
11,400 00	90 00	90 00	8,850 00	0 00	2,631 97	2,631 97	0 00	0 00	0 00
11,430 00	90 00	90 00	8,850 00	0 00	2,661 97	2,661 97	0 00	0 00	0 00
11,460 00	90 00	90 00	8,850 00	0 00	2,691 97	2,691 97	0 00	0 00	0 00
11,490 00	90 00	90 00	8,850 00	0 00	2,721 97	2,721 97	0 00	0 00	0 00
11,520 00	90 00	90 00	8,850 00	0 00	2,751 97	2,751 97	0 00	0 00	0 00
11,550 00	90 00	90 00	8,850 00	0 00	2,781 97	2,781 97	0 00	0 00	0 00
11,580 00	90 00	90 00	8,850 00	0 00	2,811 97	2,811 97	0 00	0 00	0 00
11,610 00	90 00	90 00	8,850 00	0 00	2,841 97	2,841 97	0 00	0 00	0 00
11,640 00	90 00	90 00	8,850 00	0 00	2,871 97	2,871 97	0 00	0 00	0 00
11,670 00	90 00	90 00	8,850 00	0 00	2,901 97	2,901 97	0 00	0 00	0 00
11,700 00	90 00	90 00	8,850 00	0 00	2,931 97	2,931 97	0 00	0 00	0 00
11,730 00	90 00	90 00	8,850 00	0 00	2,961 97	2,961 97	0 00	0 00	0 00
11,760 00	90 00	90 00	8,850 00	0 00	2,991 97	2,991 97	0 00	0 00	0 00
11,790 00	90 00	90 00	8,850 00	0 00	3,021 97	3,021 97	0 00	0 00	0 00
11,820 00	90 00	90 00	8,850 00	0 00	3,051 97	3,051 97	0 00	0 00	0 00
11,850 00	90 00	90 00	8,850 00	0 00	3,081 97	3,081 97	0 00	0 00	0 00
11,880 00	90 00	90 00	8,850 00	0 00	3,111 97	3,111 97	0 00	0 00	0 00
11,910 00	90 00	90 00	8,850 00	0 00	3,141 97	3,141 97	0 00	0 00	0 00
11,940 00	90 00	90 00	8,850 00	0 00	3,171 97	3,171 97	0 00	0 00	0 00
11,970 00	90 00	90 00	8,850 00	0 00	3,201 97	3,201 97	0 00	0 00	0 00
12,000 00	90 00	90 00	8,850 00	0 00	3,231 97	3,231 97	0 00	0 00	0 00
12,030 00	90 00	90 00	8,850 00	0 00	3,261 97	3,261 97	0 00	0 00	0 00
12,060 00	90 00	90 00	8,850 00	0 00	3,291 97	3,291 97	0 00	0 00	0 00
12,090 00	90 00	90 00	8,850 00	0 00	3,321 97	3,321 97	0 00	0 00	0 00
12,120 00	90 00	90 00	8,850 00	0 00	3,351 97	3,351 97	0 00	0 00	0 00
12,150 00	90 00	90 00	8,850 00	0 00	3,381 97	3,381 97	0 00	0 00	0 00

Black Viper Energy

Survey Report

Company: Cimarex Energy Co., Inc.
 Project: Chaves Co., New Mexico
 Site: Yorktown 12 Fee #2H
 Well: Yorktown 12 Fee #2H
 Wellbore: Lateral #1
 Design: Plan #1

Local Co-ordinate Reference: Well Yorktown 12 Fee #2H
 TVD Reference: WELL @ 4384.00ft (Original Well Elev)
 MD Reference: WELL @ 4384.00ft (Original Well Elev)
 North Reference: Gnd
 Survey Calculation Method: Minimum Curvature
 Database: EDM 2003 14 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)
12,180.00	90.00	90.00	8,850.00	0.00	3,411.97	3,411.97	0.00	0.00	0.00
12,210.00	90.00	90.00	8,850.00	0.00	3,441.97	3,441.97	0.00	0.00	0.00
12,240.00	90.00	90.00	8,850.00	0.00	3,471.97	3,471.97	0.00	0.00	0.00
12,270.00	90.00	90.00	8,850.00	0.00	3,501.97	3,501.97	0.00	0.00	0.00
12,300.00	90.00	90.00	8,850.00	0.00	3,531.97	3,531.97	0.00	0.00	0.00
12,330.00	90.00	90.00	8,850.00	0.00	3,561.97	3,561.97	0.00	0.00	0.00
12,360.00	90.00	90.00	8,850.00	0.00	3,591.97	3,591.97	0.00	0.00	0.00
12,390.00	90.00	90.00	8,850.00	0.00	3,621.97	3,621.97	0.00	0.00	0.00
12,420.00	90.00	90.00	8,850.00	0.00	3,651.97	3,651.97	0.00	0.00	0.00
12,450.00	90.00	90.00	8,850.00	0.00	3,681.97	3,681.97	0.00	0.00	0.00
12,480.00	90.00	90.00	8,850.00	0.00	3,711.97	3,711.97	0.00	0.00	0.00
12,510.00	90.00	90.00	8,850.00	0.00	3,741.97	3,741.97	0.00	0.00	0.00
12,540.00	90.00	90.00	8,850.00	0.00	3,771.97	3,771.97	0.00	0.00	0.00
12,570.00	90.00	90.00	8,850.00	0.00	3,801.97	3,801.97	0.00	0.00	0.00
12,600.00	90.00	90.00	8,850.00	0.00	3,831.97	3,831.97	0.00	0.00	0.00
12,630.00	90.00	90.00	8,850.00	0.00	3,861.97	3,861.97	0.00	0.00	0.00
12,660.00	90.00	90.00	8,850.00	0.00	3,891.97	3,891.97	0.00	0.00	0.00
12,690.00	90.00	90.00	8,850.00	0.00	3,921.97	3,921.97	0.00	0.00	0.00
12,720.00	90.00	90.00	8,850.00	0.00	3,951.97	3,951.97	0.00	0.00	0.00
12,750.00	90.00	90.00	8,850.00	0.00	3,981.97	3,981.97	0.00	0.00	0.00
12,780.00	90.00	90.00	8,850.00	0.00	4,011.97	4,011.97	0.00	0.00	0.00
12,810.00	90.00	90.00	8,850.00	0.00	4,041.97	4,041.97	0.00	0.00	0.00
12,840.00	90.00	90.00	8,850.00	0.00	4,071.97	4,071.97	0.00	0.00	0.00
12,870.00	90.00	90.00	8,850.00	0.00	4,101.97	4,101.97	0.00	0.00	0.00
12,900.00	90.00	90.00	8,850.00	0.00	4,131.97	4,131.97	0.00	0.00	0.00
12,930.00	90.00	90.00	8,850.00	0.00	4,161.97	4,161.97	0.00	0.00	0.00
12,960.00	90.00	90.00	8,850.00	0.00	4,191.97	4,191.97	0.00	0.00	0.00
12,990.00	90.00	90.00	8,850.00	0.00	4,221.97	4,221.97	0.00	0.00	0.00
13,020.00	90.00	90.00	8,850.00	0.00	4,251.97	4,251.97	0.00	0.00	0.00
13,050.00	90.00	90.00	8,850.00	0.00	4,281.97	4,281.97	0.00	0.00	0.00
13,080.00	90.00	90.00	8,850.00	0.00	4,311.97	4,311.97	0.00	0.00	0.00
13,110.00	90.00	90.00	8,850.00	0.00	4,341.97	4,341.97	0.00	0.00	0.00
13,140.00	90.00	90.00	8,850.00	0.00	4,371.97	4,371.97	0.00	0.00	0.00
13,170.00	90.00	90.00	8,850.00	0.00	4,401.97	4,401.97	0.00	0.00	0.00
13,200.00	90.00	90.00	8,850.00	0.00	4,431.97	4,431.97	0.00	0.00	0.00
13,230.00	90.00	90.00	8,850.00	0.00	4,461.97	4,461.97	0.00	0.00	0.00
13,260.00	90.00	90.00	8,850.00	0.00	4,491.97	4,491.97	0.00	0.00	0.00
13,290.00	90.00	90.00	8,850.00	0.00	4,521.97	4,521.97	0.00	0.00	0.00
13,320.00	90.00	90.00	8,850.00	0.00	4,551.97	4,551.97	0.00	0.00	0.00
13,350.00	90.00	90.00	8,850.00	0.00	4,581.97	4,581.97	0.00	0.00	0.00
13,380.00	90.00	90.00	8,850.00	0.00	4,611.97	4,611.97	0.00	0.00	0.00
13,394.23	90.00	90.00	8,850.00	0.00	4,626.20	4,626.20	0.00	0.00	0.00

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Yorktown 12 Fee #2H
Project:	Chaves Co., New Mexico	TVD Reference:	WELL @ 4384.00ft (Original Well Elev)
Site:	Yorktown 12 Fee #2H	MD Reference:	WELL @ 4384.00ft (Original Well Elev)
Well:	Yorktown 12 Fee #2H	North Reference:	Gnd
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003 14 Server Db

Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
PBHL [Yorktown 12 Fee	0 00	0 00	8,850 00	0 00	4,626 20	739,671 40	673,556 60	33° 1' 55 670 N	103° 46' 1 332 W
- plan hits target									
- Point									

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
		(ft)	(ft)	
8,650 00	8,650 00	0 00	0 00	KOP 8650 00 MD
8,659 01	8,659 01	0 00	0 00	Build 30 00°/100
8,959 01	8,850 00	0 00	190 99	EOC Hold 90° Inc @ 90 00 Azm

Checked By: _____	Approved By: _____	Date: _____
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Cimarex Energy Co., Inc.
Yorktown 12 Fee #2H - Plan #1

30-005-28004

Chaves Co., New Mexico
Yorktown 12 Fee #2H

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8650.00	0.000	0.000	8650.00	0.00 N	0.00 E	0.00	0.00
8659.01	0.000	0.000	8659.01	0.00 N	0.00 E	0.00	0.00
8670.00	3.296	90.000	8669.99	0.00 N	0.32 E	0.32	30.00
8700.00	12.296	90.000	8699.69	0.00 N	4.38 E	4.38	30.00
8730.00	21.296	90.000	8728.38	0.00 N	13.04 E	13.04	30.00
8760.00	30.296	90.000	8755.36	0.00 N	26.08 E	26.08	30.00
8790.00	39.296	90.000	8779.97	0.00 N	43.18 E	43.18	30.00
8820.00	48.296	90.000	8801.60	0.00 N	63.93 E	63.93	30.00
8850.00	57.296	90.000	8819.72	0.00 N	87.80 E	87.80	30.00
8880.00	66.296	90.000	8833.89	0.00 N	114.21 E	114.21	30.00
8910.00	75.296	90.000	8843.74	0.00 N	142.51 E	142.51	30.00
8940.00	84.296	90.000	8849.05	0.00 N	172.00 E	172.00	30.00
8959.01	90.000	90.000	8850.00	0.00 N	190.99 E	190.99	30.00
8970.00	90.000	90.000	8850.00	0.00 N	201.97 E	201.97	0.00
9000.00	90.000	90.000	8850.00	0.00 N	231.97 E	231.97	0.00
9030.00	90.000	90.000	8850.00	0.00 N	261.97 E	261.97	0.00
9060.00	90.000	90.000	8850.00	0.00 N	291.97 E	291.97	0.00
9090.00	90.000	90.000	8850.00	0.00 N	321.97 E	321.97	0.00
9120.00	90.000	90.000	8850.00	0.00 N	351.97 E	351.97	0.00
9150.00	90.000	90.000	8850.00	0.00 N	381.97 E	381.97	0.00
9180.00	90.000	90.000	8850.00	0.00 N	411.97 E	411.97	0.00
9210.00	90.000	90.000	8850.00	0.00 N	441.97 E	441.97	0.00
9240.00	90.000	90.000	8850.00	0.00 N	471.97 E	471.97	0.00
9270.00	90.000	90.000	8850.00	0.00 N	501.97 E	501.97	0.00
9300.00	90.000	90.000	8850.00	0.00 N	531.97 E	531.97	0.00
9330.00	90.000	90.000	8850.00	0.00 N	561.97 E	561.97	0.00
9360.00	90.000	90.000	8850.00	0.00 N	591.97 E	591.97	0.00
9390.00	90.000	90.000	8850.00	0.00 N	621.97 E	621.97	0.00
9420.00	90.000	90.000	8850.00	0.00 N	651.97 E	651.97	0.00
9450.00	90.000	90.000	8850.00	0.00 N	681.97 E	681.97	0.00
9480.00	90.000	90.000	8850.00	0.00 N	711.97 E	711.97	0.00
9510.00	90.000	90.000	8850.00	0.00 N	741.97 E	741.97	0.00
9540.00	90.000	90.000	8850.00	0.00 N	771.97 E	771.97	0.00
9570.00	90.000	90.000	8850.00	0.00 N	801.97 E	801.97	0.00
9600.00	90.000	90.000	8850.00	0.00 N	831.97 E	831.97	0.00
9630.00	90.000	90.000	8850.00	0.00 N	861.97 E	861.97	0.00
9660.00	90.000	90.000	8850.00	0.00 N	891.97 E	891.97	0.00
9690.00	90.000	90.000	8850.00	0.00 N	921.97 E	921.97	0.00
9720.00	90.000	90.000	8850.00	0.00 N	951.97 E	951.97	0.00
9750.00	90.000	90.000	8850.00	0.00 N	981.97 E	981.97	0.00
9780.00	90.000	90.000	8850.00	0.00 N	1011.97 E	1011.97	0.00
9810.00	90.000	90.000	8850.00	0.00 N	1041.97 E	1041.97	0.00
9840.00	90.000	90.000	8850.00	0.00 N	1071.97 E	1071.97	0.00
9870.00	90.000	90.000	8850.00	0.00 N	1101.97 E	1101.97	0.00
9900.00	90.000	90.000	8850.00	0.00 N	1131.97 E	1131.97	0.00
9930.00	90.000	90.000	8850.00	0.00 N	1161.97 E	1161.97	0.00
9960.00	90.000	90.000	8850.00	0.00 N	1191.97 E	1191.97	0.00
9990.00	90.000	90.000	8850.00	0.00 N	1221.97 E	1221.97	0.00
10020.00	90.000	90.000	8850.00	0.00 N	1251.97 E	1251.97	0.00
10050.00	90.000	90.000	8850.00	0.00 N	1281.97 E	1281.97	0.00
10080.00	90.000	90.000	8850.00	0.00 N	1311.97 E	1311.97	0.00
10110.00	90.000	90.000	8850.00	0.00 N	1341.97 E	1341.97	0.00
10140.00	90.000	90.000	8850.00	0.00 N	1371.97 E	1371.97	0.00
10170.00	90.000	90.000	8850.00	0.00 N	1401.97 E	1401.97	0.00
10200.00	90.000	90.000	8850.00	0.00 N	1431.97 E	1431.97	0.00
10230.00	90.000	90.000	8850.00	0.00 N	1461.97 E	1461.97	0.00
10260.00	90.000	90.000	8850.00	0.00 N	1491.97 E	1491.97	0.00
10290.00	90.000	90.000	8850.00	0.00 N	1521.97 E	1521.97	0.00
10320.00	90.000	90.000	8850.00	0.00 N	1551.97 E	1551.97	0.00
10350.00	90.000	90.000	8850.00	0.00 N	1581.97 E	1581.97	0.00
10380.00	90.000	90.000	8850.00	0.00 N	1611.97 E	1611.97	0.00
10410.00	90.000	90.000	8850.00	0.00 N	1641.97 E	1641.97	0.00
10440.00	90.000	90.000	8850.00	0.00 N	1671.97 E	1671.97	0.00
10470.00	90.000	90.000	8850.00	0.00 N	1701.97 E	1701.97	0.00
10500.00	90.000	90.000	8850.00	0.00 N	1731.97 E	1731.97	0.00

10530.00	90.000	90.000	8850.00	0.00	N	1761.97	E	1761.97	0.00
10560.00	90.000	90.000	8850.00	0.00	N	1791.97	E	1791.97	0.00
10590.00	90.000	90.000	8850.00	0.00	N	1821.97	E	1821.97	0.00
10620.00	90.000	90.000	8850.00	0.00	N	1851.97	E	1851.97	0.00
10650.00	90.000	90.000	8850.00	0.00	N	1881.97	E	1881.97	0.00
10680.00	90.000	90.000	8850.00	0.00	N	1911.97	E	1911.97	0.00
10710.00	90.000	90.000	8850.00	0.00	N	1941.97	E	1941.97	0.00
10740.00	90.000	90.000	8850.00	0.00	N	1971.97	E	1971.97	0.00
10770.00	90.000	90.000	8850.00	0.00	N	2001.97	E	2001.97	0.00
10800.00	90.000	90.000	8850.00	0.00	N	2031.97	E	2031.97	0.00
10830.00	90.000	90.000	8850.00	0.00	N	2061.97	E	2061.97	0.00
10860.00	90.000	90.000	8850.00	0.00	N	2091.97	E	2091.97	0.00
10890.00	90.000	90.000	8850.00	0.00	N	2121.97	E	2121.97	0.00
10920.00	90.000	90.000	8850.00	0.00	N	2151.97	E	2151.97	0.00
10950.00	90.000	90.000	8850.00	0.00	N	2181.97	E	2181.97	0.00
10980.00	90.000	90.000	8850.00	0.00	N	2211.97	E	2211.97	0.00
11010.00	90.000	90.000	8850.00	0.00	N	2241.97	E	2241.97	0.00
11040.00	90.000	90.000	8850.00	0.00	N	2271.97	E	2271.97	0.00
11070.00	90.000	90.000	8850.00	0.00	N	2301.97	E	2301.97	0.00
11100.00	90.000	90.000	8850.00	0.00	N	2331.97	E	2331.97	0.00
11130.00	90.000	90.000	8850.00	0.00	N	2361.97	E	2361.97	0.00
11160.00	90.000	90.000	8850.00	0.00	N	2391.97	E	2391.97	0.00
11190.00	90.000	90.000	8850.00	0.00	N	2421.97	E	2421.97	0.00
11220.00	90.000	90.000	8850.00	0.00	N	2451.97	E	2451.97	0.00
11250.00	90.000	90.000	8850.00	0.00	N	2481.97	E	2481.97	0.00
11280.00	90.000	90.000	8850.00	0.00	N	2511.97	E	2511.97	0.00
11310.00	90.000	90.000	8850.00	0.00	N	2541.97	E	2541.97	0.00
11340.00	90.000	90.000	8850.00	0.00	N	2571.97	E	2571.97	0.00
11370.00	90.000	90.000	8850.00	0.00	N	2601.97	E	2601.97	0.00
11400.00	90.000	90.000	8850.00	0.00	N	2631.97	E	2631.97	0.00
11430.00	90.000	90.000	8850.00	0.00	N	2661.97	E	2661.97	0.00
11460.00	90.000	90.000	8850.00	0.00	N	2691.97	E	2691.97	0.00
11490.00	90.000	90.000	8850.00	0.00	N	2721.97	E	2721.97	0.00
11520.00	90.000	90.000	8850.00	0.00	N	2751.97	E	2751.97	0.00
11550.00	90.000	90.000	8850.00	0.00	N	2781.97	E	2781.97	0.00
11580.00	90.000	90.000	8850.00	0.00	N	2811.97	E	2811.97	0.00
11610.00	90.000	90.000	8850.00	0.00	N	2841.97	E	2841.97	0.00
11640.00	90.000	90.000	8850.00	0.00	N	2871.97	E	2871.97	0.00
11670.00	90.000	90.000	8850.00	0.00	N	2901.97	E	2901.97	0.00
11700.00	90.000	90.000	8850.00	0.00	N	2931.97	E	2931.97	0.00
11730.00	90.000	90.000	8850.00	0.00	N	2961.97	E	2961.97	0.00
11760.00	90.000	90.000	8850.00	0.00	N	2991.97	E	2991.97	0.00
11790.00	90.000	90.000	8850.00	0.00	N	3021.97	E	3021.97	0.00
11820.00	90.000	90.000	8850.00	0.00	N	3051.97	E	3051.97	0.00
11850.00	90.000	90.000	8850.00	0.00	N	3081.97	E	3081.97	0.00
11880.00	90.000	90.000	8850.00	0.00	N	3111.97	E	3111.97	0.00
11910.00	90.000	90.000	8850.00	0.00	N	3141.97	E	3141.97	0.00
11940.00	90.000	90.000	8850.00	0.00	N	3171.97	E	3171.97	0.00
11970.00	90.000	90.000	8850.00	0.00	N	3201.97	E	3201.97	0.00
12000.00	90.000	90.000	8850.00	0.00	N	3231.97	E	3231.97	0.00
12030.00	90.000	90.000	8850.00	0.00	N	3261.97	E	3261.97	0.00
12060.00	90.000	90.000	8850.00	0.00	N	3291.97	E	3291.97	0.00
12090.00	90.000	90.000	8850.00	0.00	N	3321.97	E	3321.97	0.00
12120.00	90.000	90.000	8850.00	0.00	N	3351.97	E	3351.97	0.00
12150.00	90.000	90.000	8850.00	0.00	N	3381.97	E	3381.97	0.00
12180.00	90.000	90.000	8850.00	0.00	N	3411.97	E	3411.97	0.00
12210.00	90.000	90.000	8850.00	0.00	N	3441.97	E	3441.97	0.00
12240.00	90.000	90.000	8850.00	0.00	N	3471.97	E	3471.97	0.00
12270.00	90.000	90.000	8850.00	0.00	N	3501.97	E	3501.97	0.00
12300.00	90.000	90.000	8850.00	0.00	N	3531.97	E	3531.97	0.00
12330.00	90.000	90.000	8850.00	0.00	N	3561.97	E	3561.97	0.00
12360.00	90.000	90.000	8850.00	0.00	N	3591.97	E	3591.97	0.00
12390.00	90.000	90.000	8850.00	0.00	N	3621.97	E	3621.97	0.00
12420.00	90.000	90.000	8850.00	0.00	N	3651.97	E	3651.97	0.00
12450.00	90.000	90.000	8850.00	0.00	N	3681.97	E	3681.97	0.00
12480.00	90.000	90.000	8850.00	0.00	N	3711.97	E	3711.97	0.00
12510.00	90.000	90.000	8850.00	0.00	N	3741.97	E	3741.97	0.00
12540.00	90.000	90.000	8850.00	0.00	N	3771.97	E	3771.97	0.00
12570.00	90.000	90.000	8850.00	0.00	N	3801.97	E	3801.97	0.00
12600.00	90.000	90.000	8850.00	0.00	N	3831.97	E	3831.97	0.00
12630.00	90.000	90.000	8850.00	0.00	N	3861.97	E	3861.97	0.00
12660.00	90.000	90.000	8850.00	0.00	N	3891.97	E	3891.97	0.00
12690.00	90.000	90.000	8850.00	0.00	N	3921.97	E	3921.97	0.00
12720.00	90.000	90.000	8850.00	0.00	N	3951.97	E	3951.97	0.00
12750.00	90.000	90.000	8850.00	0.00	N	3981.97	E	3981.97	0.00

12780.00	90.000	90.000	8850.00	0.00 N	4011.97 E	4011.97	0.00
12810.00	90.000	90.000	8850.00	0.00 N	4041.97 E	4041.97	0.00
12840.00	90.000	90.000	8850.00	0.00 N	4071.97 E	4071.97	0.00
12870.00	90.000	90.000	8850.00	0.00 N	4101.97 E	4101.97	0.00
12900.00	90.000	90.000	8850.00	0.00 N	4131.97 E	4131.97	0.00
12930.00	90.000	90.000	8850.00	0.00 N	4161.97 E	4161.97	0.00
12960.00	90.000	90.000	8850.00	0.00 N	4191.97 E	4191.97	0.00
12990.00	90.000	90.000	8850.00	0.00 N	4221.97 E	4221.97	0.00
13020.00	90.000	90.000	8850.00	0.00 N	4251.97 E	4251.97	0.00
13050.00	90.000	90.000	8850.00	0.00 N	4281.97 E	4281.97	0.00
13080.00	90.000	90.000	8850.00	0.00 N	4311.97 E	4311.97	0.00
13110.00	90.000	90.000	8850.00	0.00 N	4341.97 E	4341.97	0.00
13140.00	90.000	90.000	8850.00	0.00 N	4371.97 E	4371.97	0.00
13170.00	90.000	90.000	8850.00	0.00 N	4401.97 E	4401.97	0.00
13200.00	90.000	90.000	8850.00	0.00 N	4431.97 E	4431.97	0.00
13230.00	90.000	90.000	8850.00	0.00 N	4461.97 E	4461.97	0.00
13260.00	90.000	90.000	8850.00	0.00 N	4491.97 E	4491.97	0.00
13290.00	90.000	90.000	8850.00	0.00 N	4521.97 E	4521.97	0.00
13320.00	90.000	90.000	8850.00	0.00 N	4551.97 E	4551.97	0.00
13350.00	90.000	90.000	8850.00	0.00 N	4581.97 E	4581.97	0.00
13380.00	90.000	90.000	8850.00	0.00 N	4611.97 E	4611.97	0.00
13394.23	90.000	90.000	8850.00	0.00 N	4626.20 E	4626.20	0.00

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
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 Site and calculated along an Azimuth of 90.000° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), New Mexico East 3001.
Central meridian is -104.333°.

Grid Convergence at Surface is 0.300°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 13394.23ft.,
the Bottom Hole Displacement is 4626.20ft., in the Direction of 90.000° (Grid).

Casing, Cementing, BOP, and Mud Details

Cimarex Energy Co. of Colorado

Yorktown 12 Fee No. 1

Unit Letter D Section 12

T15S – R31E Chaves County, NM

30-005-28004

1. Cementing & Setting Depth:

13-3/8" Surface

In 17-1/2" hole, run 13-3/8" 48# H-40 STC casing to 340.' Cement with lead of 115 sx Light Premium Plus + 0.125# Poly-E-Flake + 1% CaCl (wt 14.2, yld 1.64) and tail of 225 sx Premium Plus + 2% CaCl (wt 14.8, yld 1.35)

8-5/8" Intermediate

In 11" hole, run 8-5/8" 24# J-55 LTC casing to 1800.' Cement with lead of 371 sx Interfill C + 0.25# Flocele (wt 11.9, yld 2.45) and tail of 201 sx Premium Plus + 1% CaCl₂ (wt 14.8, yld 1.33)

5-1/2" Production

In 7-7/8" hole, run 5-1/2" 17# N-80 LTC to 13394.' Cement with lead of 650 sx Interfill H + 0.25% HR-7 + 5# Gilsonite + 0.25# Flocele (wt 11.9, yld 2.47) and tail of 370 sx Super H + 0.5% Halad-344 + 0.4% CFR-3 + 1# Salt + 5# Gilsonite + 0.125# Poly-E-Flake + 0.35% HR-7 (wt 13.0, yld 1.67)

2. Pressure control Equipment:

A 13-3/8" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventor. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. BOP unit will be hydraulically operated. BOP will be nipped up on the 9 5/8" casing and will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling.

3. Proposed Mud Circulating System:

Depth 0 – 340'

Mud Wt: 8.4-8.6

Viscosity: 28-29

Fluid Loss: May lose Circ

Type: Mud Fresh water spud mud; add paper to control seepage; high viscosity sweeps to clean hole.

Casing, Cementing, BOP, and Mud Details

Cimarex Energy Co. of Colorado

Yorktown 12 Fee No. 1

Unit Letter D Section 12

T15S – R31E Chaves County, NM

Depth: 340' – 1800'

Mud Wt: 10.0

Viscosity: 28 – 29

Fluid Loss: May lose circ.

Type: Brine water. Add paper as needed to control seepage and add lime to control pH (9-10). Use high viscosity sweeps to clean hole.

Depth: 1800' - 8300'

Mud Weight: 8.4 - 9.9

Viscosity: 28 – 29

Fluid Loss: NC

Type: Fresh water. Paper for seepage. Lime for pH (9 - 9.5)

Depth: 8300' – 10000'

Mud Wt: 8.45 - 8.9

Viscosity: 28 – 29

Fluid Loss: NC

Type: Cut brine. Caustic for pH control.

Depth: 10000' – 13394'

Mud Wt: 8.9 – 9.7

Viscosity: 29 – 45

Fluid Loss: NC

Type: Cut Brine. Caustic for pH control.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs. Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until production casing is run and cemented.