

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB No. 1004-0135
Expires July 31, 1996**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on reverse side**1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator
Cimarex Energy Co. of Colorado3a. Address
600 N. Marienfeld St., Ste. 600; Midland, TX 797073b. Phone No. (include area code)
432-571-78004. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1600 FNL & 1200 FEL
1-25S-25E

5. Lease Serial No.

NM-112254

6. If Indian, Allotted or Cattle Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Vern 1 Federal No. 1

9. API Well No.

30-015-34109

10. Field and Pool, or Exploratory Area

Chosa Draw; Upper Penn (Strawn)

11. County or Parish, State

Eddy County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☒ Recomplete	☒ Other <u>Recomplete to</u>
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	<u>Horizontal Bone Spring</u>
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, included estimated starting date of any proposed work and approximate duration thereof.

If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The Vern 1 Federal No. 1 is currently producing from Strawn perfs at 10301-10321.' CIBP @ 11090' w/ 35' cmt above Morrow perfs @ 11190-11465.' CIBP @ 10800' w/ 20' cmt over Atoka perfs @ 10860-10865.' CIBP @ 10370' w/ 2 sx sand over Atoka perfs @ 10432-10436.' Cimarex proposes to recomplete the well horizontally in the Bone Spring as shown below.

- NDWH & NUBOP. POOH w/ tbg. Dump 35' cmt over CIBP @ 10370.' Set CIBP @ 10200' w/ 35' cmt.
- Set CIBP @ 7321' and kick off 4 3/4" lateral at 6829.' Drill to TD @ 14012' MD and 7487' TVD. Run 3 1/2" 9.3# L-80 PEAK completion liner.

Please see attached plat and preliminary directional survey.

**SUBJECT TO LIKE
APPROVAL BY STATE****SEE ATTACHED FOR
CONDITIONS OF APPROVAL**14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Zeno Farris

Signature

Zeno Farris

Title

Manager Operations Administration

Date

March 4, 2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Office

Conditions of Approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on reverse)

APPROVED

MAR 24 2010

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

DISTRICT I
1625 N. FRENCH DR., HOBBES, NM 86240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 86210

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

☐ AMENDED REPORT

API Number 30-015-34109	Pool Code	Pool Name Bone Spring Wildcat
Property Code 34814	Property Name VERN 1 FEDERAL	Well Number 1
GRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3508'

Surface Location

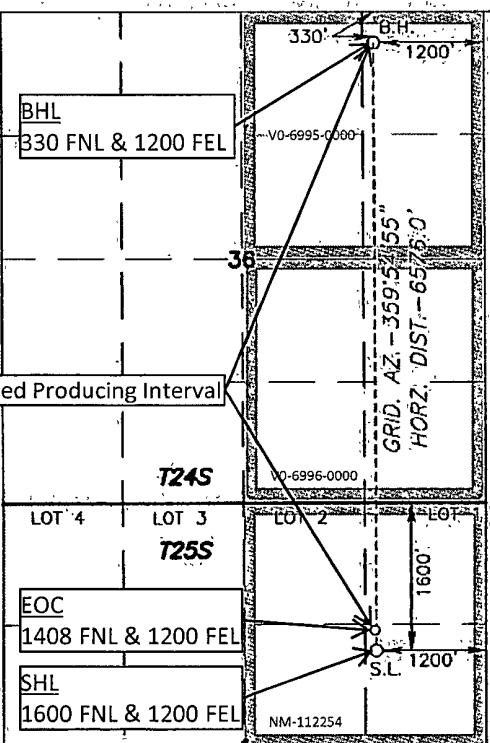
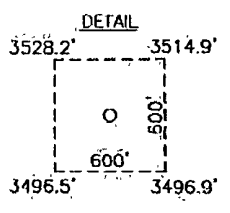
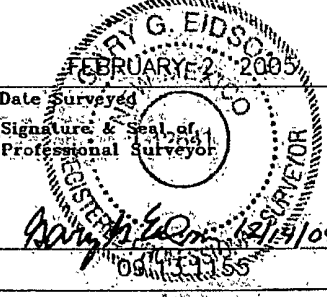
UL or lot No.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
H	1	25-S	25-E		1600	NORTH	1200	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
A	36	24-S	25-E		330	NORTH	1200	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
480.08		P	

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

	GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=422618.2 N X=496636.3 E LAT.=32°09'42.82" N LONG.=104°20'39.13" W BOTTOM HOLE LOCATION Y=429192.5 N X=496626.7 E DETAIL 	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 unleased 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> Signature Date 3/4/2010 Printed Name Zeno Farris 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.  Date Surveyed Signature & Seal of Professional Surveyor Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 9239
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Cimarex Energy Co.

Eddy County (NM27E)

Sec 1 - T25S - R25E

Vern 1 Fed #1

Wellbore #1

Plan: Plan #1

Standard Planning Report

01 March, 2010

Great White Directional Services

Planning Report

Database:	EDM-5000.1 Single User Db	Local Co-ordinate Reference:	Site Sec 1 - T25S - R25E
Company:	Cimarex Energy Co.	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Eddy County (NM27E)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 1 - T25S - R25E	North Reference:	Grid
Well:	Vern 1 Fed #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	Eddy County (NM27E)		
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	Sec 1 - T25S - R25E		
Site Position:	Northing:	422,618.20 usft	Latitude: 32° 9' 42.818 N
From: Map	Easting:	496,636.30 usft	Longitude: 104° 20' 39.132 W
Position Uncertainty: 0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: -0.01 °

Well	Vern 1 Fed #1		
Well Position	+N/-S	0.0 usft	Northing: 422,618.20 usft
	+E/-W	0.0 usft	Easting: 496,636.30 usft
			Latitude: 32° 9' 42.818 N
			Longitude: 104° 20' 39.132 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level: 0.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF200510	2010/03/01	8.07
			Dip Angle (°) 60.04
			Field Strength (nT) 48,677

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	Direction (°) 359.92

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,829.0	0.00	0.00	6,829.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,329.0	0.00	359.92	7,329.0	0.0	0.0	0.00	0.00	0.00	359.92	
7,630.0	90.30	359.92	7,520.0	192.0	-0.3	30.00	30.00	0.00	359.92	
14,012.4	90.30	359.92	7,486.6	6,574.3	-9.2	0.00	0.00	0.00	0.00	Vern #1

Great White Directional Services

Planning Report

Database:	EDM-5000.1 Single User Db	Local Co-ordinate Reference:	Site Sec 1 - T25S - R25E
Company:	Cimarex Energy Co.	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Eddy County (NM27E)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 1 - T25S - R25E	North Reference:	Grid
Well:	Vern 1 Fed #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,829.0	0.00	0.00	6,829.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP									
6,900.0	0.00	359.92	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	359.92	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	359.92	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	359.92	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	359.92	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,329.0	0.00	359.92	7,329.0	0.0	0.0	0.0	0.00	0.00	0.00
Begin Build 30°/100 DLS									
7,330.0	0.30	359.92	7,330.0	0.0	0.0	0.0	30.00	30.00	0.00
7,340.0	3.30	359.92	7,340.0	0.3	0.0	0.3	30.00	30.00	0.00
7,350.0	6.30	359.92	7,350.0	1.2	0.0	1.2	30.00	30.00	0.00
7,360.0	9.30	359.92	7,359.9	2.5	0.0	2.5	30.00	30.00	0.00
7,370.0	12.30	359.92	7,369.7	4.4	0.0	4.4	30.00	30.00	0.00
7,380.0	15.30	359.92	7,379.4	6.8	0.0	6.8	30.00	30.00	0.00
7,390.0	18.30	359.92	7,389.0	9.7	0.0	9.7	30.00	30.00	0.00
7,400.0	21.30	359.92	7,398.4	13.0	0.0	13.0	30.00	30.00	0.00
7,410.0	24.30	359.92	7,407.6	16.9	0.0	16.9	30.00	30.00	0.00
7,420.0	27.30	359.92	7,416.6	21.3	0.0	21.3	30.00	30.00	0.00
7,430.0	30.30	359.92	7,425.4	26.1	0.0	26.1	30.00	30.00	0.00
7,440.0	33.30	359.92	7,433.9	31.4	0.0	31.4	30.00	30.00	0.00
7,450.0	36.30	359.92	7,442.1	37.1	-0.1	37.1	30.00	30.00	0.00
7,460.0	39.30	359.92	7,450.0	43.2	-0.1	43.2	30.00	30.00	0.00
7,470.0	42.30	359.92	7,457.5	49.7	-0.1	49.7	30.00	30.00	0.00
7,480.0	45.30	359.92	7,464.8	56.6	-0.1	56.6	30.00	30.00	0.00
7,490.0	48.30	359.92	7,471.6	63.9	-0.1	63.9	30.00	30.00	0.00
7,500.0	51.30	359.92	7,478.1	71.6	-0.1	71.6	30.00	30.00	0.00
7,510.0	54.30	359.92	7,484.1	79.5	-0.1	79.5	30.00	30.00	0.00
7,520.0	57.30	359.92	7,489.7	87.8	-0.1	87.8	30.00	30.00	0.00
7,530.0	60.30	359.92	7,494.9	96.4	-0.1	96.4	30.00	30.00	0.00
7,540.0	63.30	359.92	7,499.6	105.2	-0.1	105.2	30.00	30.00	0.00
7,550.0	66.30	359.92	7,503.9	114.2	-0.2	114.2	30.00	30.00	0.00
7,560.0	69.30	359.92	7,507.7	123.5	-0.2	123.5	30.00	30.00	0.00
7,570.0	72.30	359.92	7,510.9	132.9	-0.2	132.9	30.00	30.00	0.00
7,580.0	75.30	359.92	7,513.7	142.5	-0.2	142.5	30.00	30.00	0.00
7,590.0	78.30	359.92	7,516.0	152.3	-0.2	152.3	30.00	30.00	0.00
7,600.0	81.30	359.92	7,517.8	162.1	-0.2	162.1	30.00	30.00	0.00
7,610.0	84.30	359.92	7,519.0	172.0	-0.2	172.0	30.00	30.00	0.00
7,620.0	87.30	359.92	7,519.8	182.0	-0.3	182.0	30.00	30.00	0.00
7,630.0	90.30	359.92	7,520.0	192.0	-0.3	192.0	30.00	30.00	0.00
EOC - Hold to TD									
7,700.0	90.30	359.92	7,519.6	262.0	-0.4	262.0	0.00	0.00	0.00
7,800.0	90.30	359.92	7,519.1	362.0	-0.5	362.0	0.00	0.00	0.00
7,900.0	90.30	359.92	7,518.6	462.0	-0.6	462.0	0.00	0.00	0.00
8,000.0	90.30	359.92	7,518.0	562.0	-0.8	562.0	0.00	0.00	0.00
8,100.0	90.30	359.92	7,517.5	662.0	-0.9	662.0	0.00	0.00	0.00
8,200.0	90.30	359.92	7,517.0	762.0	-1.1	762.0	0.00	0.00	0.00
8,300.0	90.30	359.92	7,516.5	862.0	-1.2	862.0	0.00	0.00	0.00
8,400.0	90.30	359.92	7,516.0	962.0	-1.3	962.0	0.00	0.00	0.00
8,500.0	90.30	359.92	7,515.4	1,062.0	-1.5	1,062.0	0.00	0.00	0.00
8,600.0	90.30	359.92	7,514.9	1,162.0	-1.6	1,162.0	0.00	0.00	0.00
8,700.0	90.30	359.92	7,514.4	1,262.0	-1.8	1,262.0	0.00	0.00	0.00
8,800.0	90.30	359.92	7,513.9	1,362.0	-1.9	1,362.0	0.00	0.00	0.00

Great White Directional Services

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Sec:1 - T25S - R25E
Company:	Cimarex Energy Co.	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Eddy County (NM27E)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 1 - T25S - R25E	North Reference:	Grid
Well:	Vern 1 Fed #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,900.0	90.30	359.92	7,513.3	1,462.0	-2.0	1,462.0	0.00	0.00	0.00	
9,000.0	90.30	359.92	7,512.8	1,562.0	-2.2	1,562.0	0.00	0.00	0.00	
9,100.0	90.30	359.92	7,512.3	1,662.0	-2.3	1,662.0	0.00	0.00	0.00	
9,200.0	90.30	359.92	7,511.8	1,762.0	-2.5	1,762.0	0.00	0.00	0.00	
9,300.0	90.30	359.92	7,511.2	1,862.0	-2.6	1,862.0	0.00	0.00	0.00	
9,400.0	90.30	359.92	7,510.7	1,962.0	-2.7	1,962.0	0.00	0.00	0.00	
9,500.0	90.30	359.92	7,510.2	2,062.0	-2.9	2,062.0	0.00	0.00	0.00	
9,600.0	90.30	359.92	7,509.7	2,162.0	-3.0	2,162.0	0.00	0.00	0.00	
9,700.0	90.30	359.92	7,509.1	2,262.0	-3.2	2,262.0	0.00	0.00	0.00	
9,800.0	90.30	359.92	7,508.6	2,362.0	-3.3	2,362.0	0.00	0.00	0.00	
9,900.0	90.30	359.92	7,508.1	2,462.0	-3.4	2,462.0	0.00	0.00	0.00	
10,000.0	90.30	359.92	7,507.6	2,562.0	-3.6	2,562.0	0.00	0.00	0.00	
10,100.0	90.30	359.92	7,507.1	2,661.9	-3.7	2,662.0	0.00	0.00	0.00	
10,200.0	90.30	359.92	7,506.5	2,761.9	-3.9	2,762.0	0.00	0.00	0.00	
10,300.0	90.30	359.92	7,506.0	2,861.9	-4.0	2,861.9	0.00	0.00	0.00	
10,400.0	90.30	359.92	7,505.5	2,961.9	-4.1	2,961.9	0.00	0.00	0.00	
10,500.0	90.30	359.92	7,505.0	3,061.9	-4.3	3,061.9	0.00	0.00	0.00	
10,600.0	90.30	359.92	7,504.4	3,161.9	-4.4	3,161.9	0.00	0.00	0.00	
10,700.0	90.30	359.92	7,503.9	3,261.9	-4.6	3,261.9	0.00	0.00	0.00	
10,800.0	90.30	359.92	7,503.4	3,361.9	-4.7	3,361.9	0.00	0.00	0.00	
10,900.0	90.30	359.92	7,502.9	3,461.9	-4.8	3,461.9	0.00	0.00	0.00	
11,000.0	90.30	359.92	7,502.3	3,561.9	-5.0	3,561.9	0.00	0.00	0.00	
11,100.0	90.30	359.92	7,501.8	3,661.9	-5.1	3,661.9	0.00	0.00	0.00	
11,200.0	90.30	359.92	7,501.3	3,761.9	-5.3	3,761.9	0.00	0.00	0.00	
11,300.0	90.30	359.92	7,500.8	3,861.9	-5.4	3,861.9	0.00	0.00	0.00	
11,400.0	90.30	359.92	7,500.2	3,961.9	-5.5	3,961.9	0.00	0.00	0.00	
11,500.0	90.30	359.92	7,499.7	4,061.9	-5.7	4,061.9	0.00	0.00	0.00	
11,600.0	90.30	359.92	7,499.2	4,161.9	-5.8	4,161.9	0.00	0.00	0.00	
11,700.0	90.30	359.92	7,498.7	4,261.9	-6.0	4,261.9	0.00	0.00	0.00	
11,800.0	90.30	359.92	7,498.1	4,361.9	-6.1	4,361.9	0.00	0.00	0.00	
11,900.0	90.30	359.92	7,497.6	4,461.9	-6.2	4,461.9	0.00	0.00	0.00	
12,000.0	90.30	359.92	7,497.1	4,561.9	-6.4	4,561.9	0.00	0.00	0.00	
12,100.0	90.30	359.92	7,496.6	4,661.9	-6.5	4,661.9	0.00	0.00	0.00	
12,200.0	90.30	359.92	7,496.1	4,761.9	-6.6	4,761.9	0.00	0.00	0.00	
12,300.0	90.30	359.92	7,495.5	4,861.9	-6.8	4,861.9	0.00	0.00	0.00	
12,400.0	90.30	359.92	7,495.0	4,961.9	-6.9	4,961.9	0.00	0.00	0.00	
12,500.0	90.30	359.92	7,494.5	5,061.9	-7.1	5,061.9	0.00	0.00	0.00	
12,600.0	90.30	359.92	7,494.0	5,161.9	-7.2	5,161.9	0.00	0.00	0.00	
12,700.0	90.30	359.92	7,493.4	5,261.9	-7.3	5,261.9	0.00	0.00	0.00	
12,800.0	90.30	359.92	7,492.9	5,361.9	-7.5	5,361.9	0.00	0.00	0.00	
12,900.0	90.30	359.92	7,492.4	5,461.9	-7.6	5,461.9	0.00	0.00	0.00	
13,000.0	90.30	359.92	7,491.9	5,561.9	-7.8	5,561.9	0.00	0.00	0.00	
13,100.0	90.30	359.92	7,491.3	5,661.9	-7.9	5,661.9	0.00	0.00	0.00	
13,200.0	90.30	359.92	7,490.8	5,761.9	-8.0	5,761.9	0.00	0.00	0.00	
13,300.0	90.30	359.92	7,490.3	5,861.9	-8.2	5,861.9	0.00	0.00	0.00	
13,400.0	90.30	359.92	7,489.8	5,961.9	-8.3	5,961.9	0.00	0.00	0.00	
13,500.0	90.30	359.92	7,489.2	6,061.9	-8.5	6,061.9	0.00	0.00	0.00	
13,600.0	90.30	359.92	7,488.7	6,161.9	-8.6	6,161.9	0.00	0.00	0.00	
13,700.0	90.30	359.92	7,488.2	6,261.9	-8.7	6,261.9	0.00	0.00	0.00	
13,800.0	90.30	359.92	7,487.7	6,361.9	-8.9	6,361.9	0.00	0.00	0.00	
13,900.0	90.30	359.92	7,487.2	6,461.9	-9.0	6,461.9	0.00	0.00	0.00	
14,000.0	90.30	359.92	7,486.6	6,561.9	-9.2	6,561.9	0.00	0.00	0.00	
14,012.4	90.30	359.92	7,486.6	6,574.3	-9.2	6,574.3	0.00	0.00	0.00	

Great White Directional Services

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Sec 1 - T25S - R25E
Company:	Cimarex Energy Co.	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Eddy County (NM27E)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 1 - T25S - R25E	North Reference:	Grid
Well:	Vern 1 Fed #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Vern #1									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Vern #1	0.00	360.00	7,490.0	6,574.3	-9.6	429,192.50	496,626.70	32° 10' 47.880 N	104° 20' 39.251 W
- plan misses target center by 3.5usft at 14012.4usft MD (7486.6 TVD, 6574.3 N, -9.2 E)									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,829.0	6,829.0	0.0	0.0	KOP
7,329.0	7,329.0	0.0	0.0	Begin Build 30°/100 DLS
7,630.0	7,520.0	192.0	-0.3	EOC - Hold to TD
14,012.4	7,486.6	6,574.3	-9.2	TD at 14012.4

Cimarex Energy Co.

Project: Eddy County (NM27E)
Site: Sec 1 - T25S - R25E
Well: Vern 1 Fed #1
Wellbore: Wellbore #1
Design: Plan #1

WELL DETAILS: Vern 1 Fed #1



+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	422618.20	496636.30	32° 9' 42.818 N	104° 20' 39.132 W

SHL: 1600' FNL / 1200' FEL

BHL: 330' FNL / 1200' FEL



Azimuths to Grid North

Total Correction: 8.08°

Magnetic Field
Strength: 48677.4snT
Dip Angle: 60.04°
Date: 2010/03/01
Model: IGRF200510

PLAN DETAILS

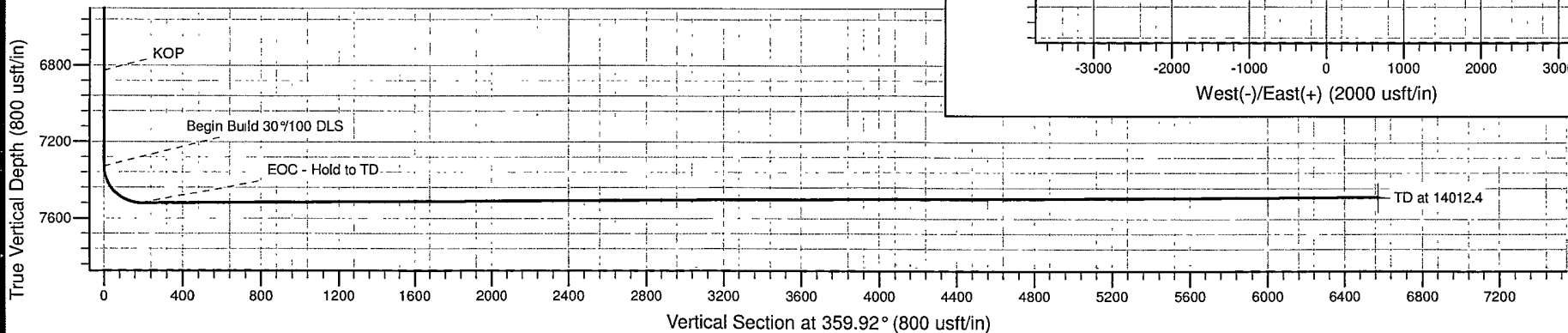
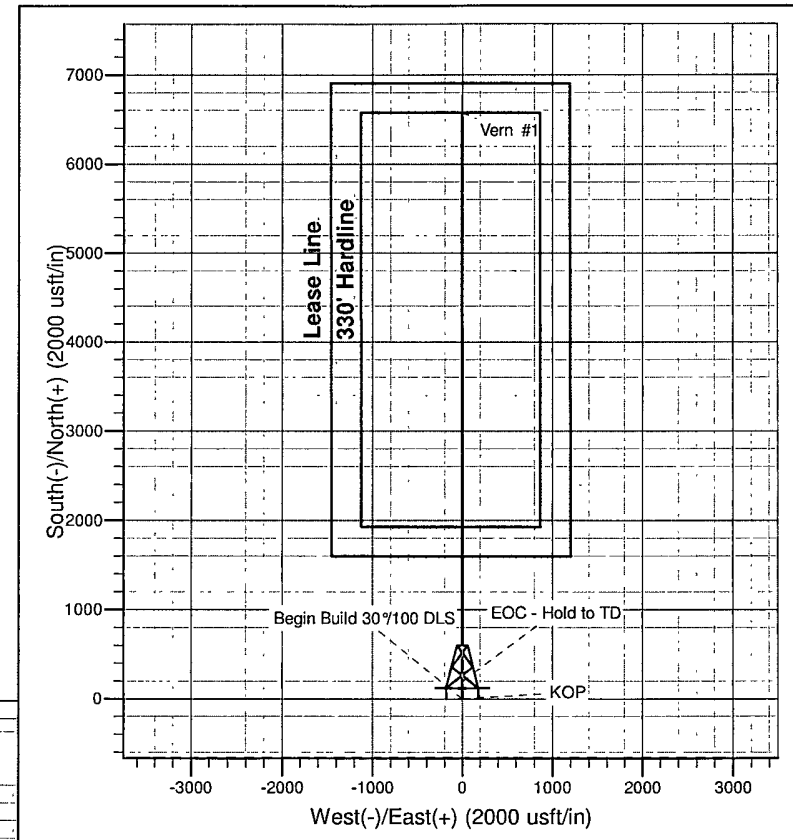
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
6829.0	0.00	0.00	6829.0	0.0	0.0	0.00	0.00	0.0	
7329.0	0.00	359.92	7329.0	0.0	0.0	0.00	359.92	0.0	
7630.0	90.30	359.92	7520.0	192.0	-0.3	30.00	359.92	192.0	
5 14012.4	90.30	359.92	7486.6	6574.3	-9.2	0.00	0.00	6574.3	Vern #1

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
Vern #1	7490.0	6574.3	-9.6	429192.50	496626.70

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
6829.0	6829.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP
7329.0	7329.0	0.00	359.92	0.0	0.0	0.0	0.0	Begin Build 30°/100 DLS
7520.0	7630.0	90.30	359.92	192.0	-0.3	192.0	192.0	EOC - Hold to TD
7486.6	14012.4	90.30	359.92	6574.3	-9.2	6574.3	6574.3	TD at 14012.4





Well: Vern 1 Fed Com #1
Location: Sec 1, T25S-R25E
County, State: Eddy, NM
Surface Location: 1600' FNL 1200' FEL
Bottomhole Loc: 330' FNL 1200' FEL Sec 36, T24S-25E
E-Mail:
Wellhead:
Xmas Tree
Tubing: 2-7/8" 6.5ppf L/N80
Superintendent: Jim Evans
Engineer: Ryan Braxton

Co. Well ID:
AFE No.:
API No.:
Lse Serial #:
Field: Carlsbad/White City
Objective: Bone Spring Ss
TVD/MD: MD Horizontal 13,988'/TVD Horizontal 7,490'
Cementing:
Mud: MI
Motors:
OH Logs No E-Logs; MWD-GR thru lateral
Rig:
Offset Wells:

Hole Size	Formation Tops	Other	Logs	Bit IADC	Cement	Mud Weight
17 1/2"	20" Conductor @ ±60' GL				Existing	8.5 - 8.8 ppg FW
12 1/4"	13 3/8" 54 ppf, J55, STC @ 210'				Existing	
8 3/4"	9 5/8" 40 ppf, N80, LTC @ 1892'					
FOC @ 5390'	Cherry Canyon @ 2609'		MWD-GR thru lateral		Existing	9 - Brine
DV tool at 6879'	Brushy Canyon @ 3840'					
	Lower Brushy Canyon @ 4883'					
	Bone Spring @ 5209'					
	1st BS A @ 5310'					
	1st BS'B @ 5486'					
	1st BS C @ 5662'					
	1st BS Ss @ 6419'					
	2nd BS Ss @ 6683'					
	Build 30 deg/100 then land lateral @ 7520'					
WS @ 7304' +/-	Lwr 2nd BS Ss @ 7445'					
TOW @ 7306' +/-	4-3/4" hole					
BOW @ 7316' +/-	Run eight (9) stage assmbly on 3 1/2", 9.3 ppf L80 tubing (UltraFX in the curve)					
KOP @ 7330' +/-						
CIBP @ 7321' +/-						
	Set CIBP @ 10200' w/ 35' cmt					
	10301-10321					
	CIBP @ 10370					
	10432-10436					
	CIBP @ 10800 w/ 20' cement					
	10860-10865					
	CIBP @ 11092 w/ 35' cement					
	11190-11465					
	5 1/2" 17.0 ppf, P110, LTC @ 12,180'					

NOTES:

MI and kill well. ND wellhead, NU 5k BOP and pull tbg. Set CIBP @ 10200' w/ 35' cement. Set CIBP @ 7321'. Set whipstock and exit casing. KOP @ 7330'. Drill curve at 30/100 and land lateral in the Lwr 2nd BS Ss at 7520'. Drill lateral to a measured depth of 13988'. Will run an 13 stage open-hole packer system on 3 1/2" tbg.

ALL INVOICES ARE TO SHOW CIMAREX ENERGY AS OPERATOR AND USE CIMAREX ACCOUNTING CODES.

**Vern 1 Federal #1
30-015-34109
Cimarex Energy Company of Colorado
March 18, 2010
Conditions of Approval**

- 1. A minimum of a 3M BOP is required and must be tested prior to performing operations. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.**
- 2. Contact BLM 575-361-2822 a minimum of 24 hours prior to setting CIBPs.**
- 3. A plug no less than 25 sx and 185' in length must be set across the top of the Wolfcamp from 8,442'-8257'.**
- 4. Surface disturbance beyond the existing pad must have prior approval.**
- 5. Closed loop system required.**
- 6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.**
- 7. Subsequent sundry and completion report required.**

CRW 031810