

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB NO. 1004-0137
Expires March 31, 2007

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

S

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other				5. Lease Serial No. NM-0556811			
b. Type of Completion. ☐ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other <u>Re-enter and test horizontal Abo</u>				6. If Indian, Allottee or Tribe Name			
2. Name of Operator Cimarex Energy Co. of Colorado				7. Unit or CA Agreement Name and No			
3. Address PO Box 140907; Irving, TX 75014				8. Lease Name and Well No. Nitro 11 Federal No. 1 (Re-entry)			
3a. Phone No (include area code) 972-443-6489				9. API Well No 30-015-34770			
4. Location of Well (Report Location clearly and in accordance with Federal requirements)* At surface 1580 FNL & 660 FWL At top prod interval reported below 1580 FNL & 660 FWL At total depth 1997 FNL & 309 FEL				10. Field and Pool, or Exploratory County Line Tank; Abo			
14. Date Spudded 05.03.06				15. Date T.D. Reached 12.06.07			
16. Date Completed ☐ D & A ☒ Ready to Prod				17. Elevations (DF, RKB, RT, GL)* 3,720' GR			
18. Total Depth: MD 11420' TVD 7350'				19. Plug Back TD. MD 11420' TVD 7350'			
20. Depth Bridge Plug Set. MD TVD				21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CBL			
22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit report) Directional Survey ☐ No ☒ Yes (Submit copy)				23. Casing and Liner Record (Report all strings set in well)			
24. Tubing Record				25. Producing Intervals			
26. Perforation Record				27. Acid, Fracture, Treatment, Cement Squeeze, etc.			
28. Production - Interval A				28. Production - Interval B			

DEC - 2 2008
OCD-ARTESIA

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17½"	13¾" H-40	48#	0'	308'		440 sx Prem Plus		0' circ	
12¼"	9¾" J-55	40#	0'	2400'		840 sx IntC/PremPI		0' circ	
8¾"	7" P-110	26#	0'	7730'		900 sx PBSH		2100' CBL	
6¾"	4½" P-110	11.6#	6840'	7463'	BTC	PEAK, no cement			
			7463'	11110'	LTC	PEAK, no cement			

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
27½"	7057'							

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Abo	6010'	7315'				
B)						
C)						
D)						

Depth Interval	Amount and Type of Material
	Please see attachment.

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity (BTU)	Production Method
01.18.08	01.31.08	24	→	20	106	135	40.3	1.428	Pumping
Choke Size	Tbg Press Flwg	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
open	SI 200 60	60	→					Producing	

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg Press Flwg	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
	SI		→						

NOV 29 2008
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Accepted for record - NMOC

* (See instructions and spaces for additional data on page 2)

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
			→						
Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

28c Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
			→						
Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

29. Disposition of Gas (*Sold, used for fuel, vented, etc.*)

Sold

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				Yates	1,018'
				Queen	1,765'
				San Andres	2,542'
				Glorieta	4,015'
				Abo	6,010'
				Wolfcamp	7,315'
				Strawn	9,540'
				Atoka	9,880'
				Morrow	10,070'
				Mississippian	10,355'

32. Additional remarks (include plugging procedure):

03.19.08 Released whipstock.

03.22.08 Drilled out CIBP (whipstock plug) @ 7000.'

04.03.08 Pressure tested seal assembly to 1000 psi.

04.04.08 Production tubing assembly: 2½" 6.5# L-80 tbg to 6529' -- 7" x 2½" TAC to 6531' -- 2½" 6.5# L-80 tbg to 6727' -- S.N. to 6,728' -- Echometer DH Gas Separator to 6734' -- 2½" B.P.M.A. to 6766'

Rod Pump Assembly: Spray Metal Polish Rod to 21' -- 1" N-97 Pony to 25' -- 1" N-97 rods to 2275' -- ¾" N-97 rods to 4475' -- ¾" N-97 rods to 6475' -- 1½" K-bars to 6725' -- R.H. rel to 6726' -- 1" pony lift sub to 6727' -- 2½" x 2" x 20' R.H.B.C. to 6747'

33. Indicate which items have been attached by placing a check in the appropriate boxes:

☐ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☒ Directional Survey
☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (*please print*) Natalie Krueger Title Regulatory AnalystSignature Natalie Krueger Date November 24, 2008

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

DISTRICT III
1000 Rio Brazosa Rd., Artec, NM 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2086

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-34770	Pool Code 97197	Pool Name County Line Tank; Abo
Property Code	Property Name NITRO "11" FEDERAL	Well Number 1
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3720'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	11	16 S	29 E		1580	NORTH	660	WEST	EDDY

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
H	11	16 S	29 E		1997	NORTH	309	EAST	EDDY
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No. NSL-5711						

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

SHL 1580 FNL & 660 FWL BHL 1997 FNL & 309 FEL	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>Zeno Farris</i> Signature Zeno Farris Printed Name Manager Operations Admin Title 11-24-08 Date
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. MARCH 4, 2008 Date Surveyed <i>[Signature]</i> Signature & Seal of Professional Surveyor 7977 Certificate No. Gary L. Jones 7977 BASIN SURVEYS	

Nitro 11 Federal No. 1 (Re-entry)

11-16S-29E

Eddy County, NM

Depth Interval	Amount and Type of Material Used
Stage 1 10023' - 10587'	Pump 119 bbl 15% HCl NeFe acid, 1,017 bbl slick water, 238 bbl Deepspot 15% HCl acid, 952 bbl slick water, 238 bbl Lightning 2,000 x-linker pad, (15-17# vis) 0.5 to 1.5 ppg 30/50# white sand on lightning 2,000 gel, 1.5 ppg to 2 ppg 20/40# white sand on 20# linear gel. Pumped down 7" & 4½" liner 55 BPM. Max psi 6,821#. Avg psi 5,860#. Avg rate 55.4 BPM. Drop 2½" ball. Pump 119 bbl of 15% HCl NeFe acid, & 189 bbl slick water, seat ball, open port at 10,325' at 6189#. ISIP 5536#. 22,500# 30/50 & 25,000# 20/40# sand.
Stage 2 9460' - 10023'	Cont pumping 235 bbl slick water, 238 bbl Deepspot 15% HCl acid, 357 bbl slick water, 238 bbl Lightning 2,000 x-linker pad, 0.5 ppg 30/50# white sand on Lightning 2,000 gel, start flush (well tried to screen out) 356 bbl slick water, 120 bbl 15% HCl NeFe acid, 26 bbl slick water. Drop 2¾" ball. Pump 15% HCl NeFe acid, 263 bbl slick water, seat ball, open port at 9,759' at 7,13#. ISIP 4,480#. 7,500# 30/50# sand. Max psi 7,655#. Avg psi 5,953#. Avg rate 53 BPM.
Stage 3 8892' - 9460'	Cont pumping 215 bbl slick water, 122 bbl Deepspot 15% HCl acid, 489 bbl slick water, 114 bbl Deepspot 15% HCl acid, 480 bbl slick water, 244 bbl Lightning 2,000 x-linker pad, 0.5 ppg 30/50# white sand on Lightning 2,000 gel, start flush (well tried to screen out) 279 bbl slick water. Drop 3" ball. 120 bbl 15% HCl NeFe acid, 223 bbl slick water, seat ball, open port at 9,196' at 6,017#. ISIP 3,904#. 6,383# 30/50# sand. Max psi 6,348#. Avg psi 5,850#. Avg rate 53 BPM.
Stage 4 8071' - 8892'	Cont pumping 251 bbl slick water, 119 bbl Deepspot 15% HCl acid, 476 bbl slick water, 119 bbl Deepspot 15% HCl acid, 476 bbl slick water, 238 bbl Lightning 2000 x-linker pad, 0.5 to 1 ppg 30/50# white sand on Lightning 2,000 gel, start flush 12 bbl 20# linear gel, 12 bbl slick water. Drop 3.25" ball. 119 bbl 15% HCl NeFe acid, 163 bbl slick water, seat ball, open port at 8,501' at 6,425#. ISIP 3,686#. 23,500# 30/50# sand. Max psi 6,528#. Avg psi 5,843#. Avg rate 57.5 BPM.
Stage 5 6844' - 8071'	Cont pumping 276 bbl slick water, 238 bbl Deepspot 15% HCl acid, 595 bbl slick water, 238 bbl Deepspot 15% HCl acid, 714 bbl of slick water, 238 bbl lightning 2,000 x-linker pad, 0.5 to 1 ppg 30/50 sand, 1.5 to 2 ppg 20/40 sand, 12 bbl 20# linear gel, 12 bbl slick water. Drop 3½" ball. 119 bbl 15% HCl NeFe acid, 150 bbl slick water, seat ball, open port at 7,375' at 5,788#. ISIP 4,154#. 58,000# 30/50, 25,000# 20/40# sand. Max psi 5,456# Avg psi 4,737#. Avg rate 66 BPM.
Stage 6 6844'-8071'	Cont pumping 272 bbl slick water, 119 bbl Deepspot 15% HCl acid, 714 bbl slick water, 444 bbl Deepspot acid, 714 bbl slick water, 238 bbl lightning 2,000 x linker pad, 0.5 to 2 ppg 30/50# sand, out of gel, shut off sand & flush with 268 bbl of slick water. 61,203# 30/50# sand. Max psi 5,044#. Avg psi 4,737#. Avg rate 66 BPM. Open well on 11/64" choke at 22:00 with 3,500#. Cont flowback operations.



Cimarex Energy Co., Inc.

Eddy Co., New Mexico

Nitro 11 Federal #1H

Nitro 11 Federal #1H

Lateral

Survey: MWD Survey #1

Standard Survey Report

03 December, 2007





Black Viper Energy
Survey Report



Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Nitro 11 Federal #1H
Project:	Eddy Co., New Mexico	TVD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Site:	Nitro 11 Federal #1H	MD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Well:	Nitro 11 Federal #1H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	Database:	EDM 2003.14.1.0 Server DB

Project:	Eddy Co., New Mexico		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Nitro 11 Federal #1H		
Site Position:		Northing:	705,500.77 ft
From:	Map	Easting:	627,664.52 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	32° 56' 20.805 N
		Longitude:	104° 3' 7.010 W
		Grid Convergence:	0.15 °

Well:	Nitro 11 Federal #1H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	32° 56' 20.805 N
		Longitude:	104° 3' 7.010 W
		Ground Level:	3,720.00 ft

Wellbore:	Lateral		
Magnetics	Model Name	Sample Date	Declination
	IGRF200510	11/01/2007	(°)
			Dip Angle
			(°)
			Field Strength
			(nT)
			8.28
			60.86
			49,376

Design:	Lateral		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	6,900.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			77.37

Survey Program	Date: 12/03/2007		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name
100.00	6,900.00	Gyro Survey (OH)	NS-GYRO-MS
6,900.00	11,420.00	MWD Survey #1 (Lateral)	MWD
			Description
			North sensing gyrocompassing m/s
			MWD - Standard

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)
6,900.00	3.48	97.22	6,899.06	34.01	9.79	16.99	0.00	0.00	0.00
6,987.00	15.70	105.10	6,984.68	30.60	23.83	29.94	14.09	14.05	9.06
First MWD Survey									
6,997.00	18.10	98.20	6,994.25	30.02	26.67	32.59	31.24	24.00	-69.00
7,007.00	20.10	101.70	7,003.70	29.45	29.89	35.61	23.04	20.00	35.00
7,017.00	22.00	100.90	7,013.03	28.75	33.42	38.89	19.22	19.00	-8.00
7,031.00	24.80	96.10	7,025.88	27.94	38.91	44.08	24.18	20.00	-34.29
7,040.00	26.40	92.80	7,034.00	27.65	42.79	47.80	23.81	17.78	-36.67
7,050.00	28.10	89.10	7,042.89	27.57	47.36	52.25	23.99	17.00	-37.00
7,062.00	30.00	86.60	7,053.38	27.80	53.18	57.98	18.79	15.83	-20.83
7,072.00	31.50	86.20	7,061.97	28.12	58.29	63.02	15.14	15.00	-4.00
7,082.00	32.60	85.20	7,070.45	28.52	63.58	68.28	12.21	11.00	-10.00



Black Viper Energy
Survey Report



Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Nitro 11 Federal #1H
Project:	Eddy Co. New Mexico	TVD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Site:	Nitro 11 Federal #1H	MD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Well:	Nitro-11 Federal #1H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	Database:	EDM 2003.14.1.0 Server DB

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)
7,093.00	33.40	84.80	7,079.67	29.04	69.55	74.21	7.54	7.27	-3.64
7,103.00	34.40	85.20	7,087.97	29.52	75.10	79.74	10.25	10.00	4.00
7,113.00	35.40	86.40	7,096.18	29.94	80.81	85.40	12.13	10.00	12.00
7,124.00	37.50	86.10	7,105.02	30.37	87.33	91.86	19.16	19.09	-2.73
7,134.00	39.30	86.30	7,112.86	30.78	93.53	97.99	18.04	18.00	2.00
7,144.00	41.20	86.30	7,120.49	31.20	99.97	104.38	19.00	19.00	0.00
7,155.00	42.30	86.70	7,128.70	31.65	107.29	111.61	10.29	10.00	3.64
7,165.00	45.00	87.00	7,135.93	32.02	114.18	118.42	27.08	27.00	3.00
7,175.00	46.60	88.20	7,142.91	32.32	121.34	125.47	18.17	16.00	12.00
7,187.00	47.90	89.30	7,151.05	32.51	130.15	134.11	12.75	10.83	9.17
7,197.00	49.10	89.70	7,157.68	32.58	137.64	141.43	12.37	12.00	4.00
7,207.00	50.70	90.60	7,164.12	32.56	145.29	148.89	17.42	16.00	9.00
7,219.00	52.20	92.00	7,171.60	32.35	154.67	158.00	15.48	12.50	11.67
7,229.00	53.80	92.90	7,177.61	32.00	162.65	165.71	17.54	16.00	9.00
7,239.00	54.70	94.50	7,183.46	31.48	170.74	173.50	15.80	9.00	16.00
7,251.00	56.50	95.80	7,190.24	30.59	180.61	182.92	17.46	15.00	10.83
7,261.00	58.10	96.60	7,195.64	29.68	188.97	190.89	17.36	16.00	8.00
7,271.00	60.00	97.30	7,200.78	28.64	197.48	198.97	19.93	19.00	7.00
7,282.00	62.00	98.00	7,206.11	27.36	207.02	207.99	19.01	18.18	6.36
7,292.00	64.30	98.40	7,210.63	26.09	215.85	216.33	23.28	23.00	4.00
7,302.00	66.40	98.50	7,214.80	24.75	224.84	224.81	21.02	21.00	1.00
7,315.00	68.40	98.40	7,219.80	22.99	236.71	236.01	15.40	15.38	-0.77
7,325.00	70.30	97.20	7,223.32	21.72	245.98	244.77	22.07	19.00	-12.00
7,339.00	72.10	95.20	7,227.84	20.29	259.15	257.32	18.66	12.86	-14.29
7,346.00	73.30	94.70	7,229.92	19.71	265.81	263.69	18.45	17.14	-7.14
7,361.00	76.50	94.30	7,233.82	18.58	280.25	277.53	21.49	21.33	-2.67
7,379.00	79.20	94.50	7,237.61	17.23	297.79	294.35	15.04	15.00	1.11
7,391.00	81.40	94.50	7,239.63	16.30	309.58	305.65	18.33	18.33	0.00
7,410.00	86.60	94.70	7,241.62	14.78	328.41	323.69	27.39	27.37	1.05
7,441.00	88.20	95.70	7,243.03	11.98	359.25	353.17	6.08	5.16	3.23
7,472.00	89.70	96.70	7,243.59	8.63	390.06	382.51	5.82	4.84	3.23
7,504.00	91.30	96.50	7,243.31	4.95	421.85	412.72	5.04	5.00	-0.63
7,536.00	91.90	96.60	7,242.42	1.30	453.63	442.93	1.90	1.88	0.31
7,568.00	93.20	96.60	7,241.00	-2.37	485.38	473.11	4.06	4.06	0.00
7,599.00	93.90	97.00	7,239.08	-6.03	516.10	502.29	2.60	2.26	1.29
7,631.00	93.40	96.90	7,237.04	-9.90	547.80	532.38	1.59	-1.56	-0.31
7,663.00	93.50	97.10	7,235.12	-13.79	579.51	562.46	0.70	0.31	0.63
7,695.00	91.50	97.10	7,233.72	-17.74	611.23	592.55	6.25	-6.25	0.00
7,727.00	91.90	97.30	7,232.77	-21.75	642.96	622.64	1.40	1.25	0.63
7,759.00	92.80	97.00	7,231.46	-25.73	674.69	652.73	2.96	2.81	-0.94
7,791.00	93.60	97.40	7,229.67	-29.74	706.39	682.78	2.79	2.50	1.25
7,823.00	92.20	98.00	7,228.05	-34.02	738.06	712.75	4.76	-4.38	1.88
7,854.00	91.90	98.60	7,226.94	-38.49	768.71	741.68	2.16	-0.97	1.94
7,887.00	90.60	97.00	7,226.22	-42.97	801.40	772.60	6.25	-3.94	-4.85
7,918.00	91.10	97.20	7,225.76	-46.80	832.16	801.78	1.74	1.61	0.65
7,950.00	89.20	96.40	7,225.68	-50.59	863.93	831.95	6.44	-5.94	-2.50
7,982.00	87.70	95.80	7,226.55	-53.99	895.74	862.24	5.05	-4.69	-1.88
8,014.00	85.80	94.90	7,228.36	-56.96	927.54	892.63	6.57	-5.94	-2.81
8,045.00	86.30	94.70	7,230.50	-59.55	958.36	922.14	1.74	1.61	-0.65
8,077.00	86.90	94.70	7,232.39	-62.17	990.20	952.63	1.88	1.88	0.00
8,109.00	86.10	95.70	7,234.35	-65.06	1,022.00	983.03	4.00	-2.50	3.13
8,140.00	86.20	95.20	7,236.43	-68.00	1,052.79	1,012.44	1.64	0.32	-1.61
8,172.00	86.70	95.20	7,238.41	-70.90	1,084.60	1,042.84	1.56	1.56	0.00
8,204.00	87.30	95.10	7,240.08	-73.77	1,116.43	1,073.27	1.90	1.88	-0.31



Black Viper Energy Survey Report



Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Nitro 11 Federal #1H
Project:	Eddy Co., New Mexico	TVD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Site:	Nitro 11 Federal #1H	MD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Well:	Nitro 11 Federal #1H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	Database:	EDM 2003.14.1.0 Server DB

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)
8,236.00	87.90	95.00	7,241.42	-76.58	1,148.28	1,103.73	1.90	1.88	-0.31
8,268.00	88.60	95.00	7,242.40	-79.37	1,180.14	1,134.21	2.19	2.19	0.00
8,300.00	89.40	95.00	7,242.96	-82.16	1,212.01	1,164.70	2.50	2.50	0.00
8,331.00	89.90	95.00	7,243.15	-84.86	1,242.89	1,194.25	1.61	1.61	0.00
8,363.00	88.10	95.20	7,243.71	-87.70	1,274.76	1,224.72	5.66	-5.63	0.63
8,395.00	88.60	94.80	7,244.63	-90.49	1,306.63	1,255.20	2.00	1.56	-1.25
8,427.00	89.10	95.00	7,245.27	-93.22	1,338.50	1,285.71	1.68	1.56	0.63
8,459.00	89.80	94.80	7,245.58	-95.96	1,370.38	1,316.22	2.28	2.19	-0.63
8,491.00	90.50	94.90	7,245.49	-98.66	1,402.27	1,346.74	2.21	2.19	0.31
8,522.00	91.20	95.10	7,245.03	-101.36	1,433.15	1,376.28	2.35	2.26	0.65
8,554.00	90.40	96.20	7,244.59	-104.51	1,464.99	1,406.67	4.25	-2.50	3.44
8,586.00	90.40	96.30	7,244.36	-108.00	1,496.80	1,436.94	0.31	0.00	0.31
8,618.00	89.60	96.50	7,244.36	-111.56	1,528.60	1,467.19	2.58	-2.50	0.63
8,649.00	89.30	96.40	7,244.66	-115.05	1,559.40	1,496.49	1.02	-0.97	-0.32
8,681.00	89.40	96.40	7,245.03	-118.61	1,591.20	1,526.74	0.31	0.31	0.00
8,713.00	89.50	96.20	7,245.33	-122.12	1,623.00	1,557.00	0.70	0.31	-0.63
8,744.00	89.60	95.90	7,245.58	-125.39	1,653.83	1,586.37	1.02	0.32	-0.97
8,776.00	88.30	96.70	7,246.16	-128.90	1,685.63	1,616.63	4.77	-4.06	2.50
8,808.00	88.30	96.70	7,247.11	-132.63	1,717.40	1,646.82	0.00	0.00	0.00
8,840.00	88.60	96.50	7,247.98	-136.31	1,749.17	1,677.02	1.13	0.94	-0.63
8,871.00	87.20	97.50	7,249.11	-140.09	1,779.92	1,706.20	5.55	-4.52	3.23
8,903.00	87.10	97.50	7,250.70	-144.26	1,811.61	1,736.20	0.31	-0.31	0.00
8,935.00	86.90	97.40	7,252.38	-148.40	1,843.29	1,766.22	0.70	-0.63	-0.31
8,967.00	86.60	97.70	7,254.19	-152.60	1,874.97	1,796.20	1.32	-0.94	0.94
8,998.00	88.10	97.10	7,255.63	-156.59	1,905.67	1,825.29	5.21	4.84	-1.94
9,029.00	88.30	97.30	7,256.60	-160.47	1,936.41	1,854.44	0.91	0.65	0.65
9,061.00	88.50	97.00	7,257.49	-164.45	1,968.15	1,884.54	1.13	0.63	-0.94
9,093.00	88.40	97.00	7,258.36	-168.35	1,999.90	1,914.67	0.31	-0.31	0.00
9,125.00	88.40	96.60	7,259.25	-172.14	2,031.67	1,944.84	1.25	0.00	-1.25
9,157.00	88.20	96.60	7,260.20	-175.81	2,063.44	1,975.04	0.63	-0.63	0.00
9,188.00	87.90	96.70	7,261.26	-179.40	2,094.21	2,004.28	1.02	-0.97	0.32
9,220.00	87.70	96.60	7,262.49	-183.10	2,125.97	2,034.46	0.70	-0.63	-0.31
9,251.00	87.50	96.60	7,263.78	-186.66	2,156.74	2,063.71	0.65	-0.65	0.00
9,282.00	87.70	96.70	7,265.08	-190.25	2,187.51	2,092.94	0.72	0.65	0.32
9,314.00	88.00	96.60	7,266.28	-193.95	2,219.27	2,123.13	0.99	0.94	-0.31
9,346.00	88.00	96.30	7,267.40	-197.55	2,251.05	2,153.35	0.94	0.00	-0.94
9,378.00	88.00	96.40	7,268.52	-201.08	2,282.83	2,183.59	0.31	0.00	0.31
9,409.00	87.80	96.30	7,269.65	-204.51	2,313.62	2,212.88	0.72	-0.65	-0.32
9,441.00	87.60	96.50	7,270.94	-208.07	2,345.39	2,243.11	0.88	-0.63	0.63
9,473.00	87.60	96.50	7,272.28	-211.69	2,377.16	2,273.32	0.00	0.00	0.00
9,505.00	87.30	96.40	7,273.70	-215.28	2,408.93	2,303.53	0.99	-0.94	-0.31
9,536.00	87.20	95.90	7,275.19	-218.60	2,439.71	2,332.84	1.64	-0.32	-1.61
9,568.00	87.00	96.10	7,276.81	-221.94	2,471.50	2,363.13	0.88	-0.63	0.63
9,600.00	86.90	96.00	7,278.51	-225.31	2,503.27	2,393.40	0.44	-0.31	-0.31
9,632.00	86.90	96.00	7,280.24	-228.65	2,535.05	2,423.68	0.00	0.00	0.00
9,663.00	87.10	95.80	7,281.86	-231.83	2,566.85	2,453.03	0.91	0.65	-0.65
9,695.00	87.20	96.20	7,283.45	-235.17	2,597.63	2,483.31	1.29	0.31	1.25
9,727.00	86.60	96.00	7,285.18	-238.57	2,629.40	2,513.57	1.98	-1.88	-0.63
9,759.00	86.60	95.70	7,287.08	-241.82	2,661.18	2,543.87	0.94	0.00	-0.94
9,790.00	86.60	95.30	7,288.92	-244.79	2,691.98	2,573.28	1.29	0.00	-1.29
9,821.00	86.60	95.30	7,290.76	-247.65	2,722.80	2,602.72	0.00	0.00	0.00
9,853.00	87.70	95.10	7,292.35	-250.55	2,754.62	2,633.14	3.49	3.44	-0.63
9,884.00	87.70	95.00	7,293.59	-253.27	2,785.48	2,662.66	0.32	0.00	-0.32
9,916.00	87.50	94.90	7,294.93	-256.03	2,817.33	2,693.13	0.70	-0.63	-0.31
9,948.00	87.60	94.90	7,296.30	-258.76	2,849.19	2,723.62	0.31	0.31	0.00



Black Viper Energy
Survey Report



Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Nitro 11 Federal #1H
Project:	Eddy Co., New Mexico	TVD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Site:	Nitro 11 Federal #1H	MD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Well:	Nitro 11 Federal #1H	North Reference:	Grid-
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	Database:	EDM 2003.14.1.0 Server DB

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)
9,979.00	87.60	94.60	7,297.60	-261.33	2,880.05	2,753.18	0.97	0.00	-0.97
10,011.00	87.40	94.90	7,299.00	-263.97	2,911.91	2,783.69	1.13	-0.63	0.94
10,042.00	87.60	95.00	7,300.35	-266.65	2,942.77	2,813.21	0.72	0.65	0.32
10,074.00	88.00	96.00	7,301.58	-269.71	2,974.60	2,843.60	3.36	1.25	3.13
10,105.00	89.20	95.80	7,302.33	-272.90	3,005.42	2,872.98	3.92	3.87	-0.65
10,137.00	87.90	93.50	7,303.14	-275.49	3,037.30	2,903.52	8.25	-4.06	-7.19
10,168.00	86.30	93.70	7,304.71	-277.43	3,068.20	2,933.25	5.20	-5.16	0.65
10,200.00	87.00	93.76	7,306.58	-279.51	3,100.08	2,963.90	2.20	2.19	0.19
10,232.00	87.90	93.60	7,308.00	-281.56	3,131.98	2,994.58	2.86	2.81	-0.50
10,264.00	86.40	93.90	7,309.60	-283.65	3,163.87	3,025.24	4.78	-4.69	0.94
10,296.00	84.90	94.80	7,312.02	-286.07	3,195.69	3,055.76	5.46	-4.69	2.81
10,328.00	85.10	95.50	7,314.81	-288.94	3,227.44	3,086.11	2.27	0.63	2.19
10,359.00	85.70	95.20	7,317.30	-291.82	3,258.20	3,115.50	2.16	1.94	-0.97
10,391.00	86.20	95.20	7,319.56	-294.71	3,289.99	3,145.89	1.56	1.56	0.00
10,423.00	86.70	95.20	7,321.54	-297.60	3,321.80	3,176.29	1.56	1.56	0.00
10,487.00	87.50	95.00	7,324.78	-303.29	3,385.46	3,237.18	1.29	1.25	-0.31
10,550.00	88.30	94.30	7,327.09	-308.39	3,448.21	3,297.29	1.69	1.27	-1.11
10,614.00	89.10	94.00	7,328.54	-313.02	3,512.03	3,358.55	1.33	1.25	-0.47
10,677.00	89.40	95.40	7,329.36	-318.18	3,574.81	3,418.68	2.27	0.48	2.22
10,741.00	90.20	95.20	7,329.59	-324.09	3,638.53	3,479.57	1.29	1.25	-0.31
10,805.00	89.00	96.60	7,330.03	-330.67	3,702.19	3,540.25	2.88	-1.88	2.19
10,900.00	86.70	98.60	7,333.60	-343.22	3,796.28	3,629.31	3.21	-2.42	2.11
10,931.00	86.40	97.90	7,335.46	-347.66	3,826.90	3,658.22	2.45	-0.97	-2.26
10,963.00	87.00	98.10	7,337.30	-352.11	3,858.54	3,688.12	1.98	1.88	0.63
10,995.00	88.20	98.20	7,338.64	-356.64	3,890.19	3,718.01	3.76	3.75	0.31
11,027.00	88.00	98.00	7,339.71	-361.15	3,921.85	3,747.92	0.88	-0.63	-0.63
11,058.00	87.90	97.40	7,340.81	-365.30	3,952.55	3,776.97	1.96	-0.32	-1.94
11,090.00	87.50	97.30	7,342.10	-369.39	3,984.26	3,807.02	1.29	-1.25	-0.31
11,122.00	87.60	97.10	7,343.47	-373.40	4,015.98	3,837.10	0.70	0.31	-0.63
11,152.00	87.50	97.30	7,344.75	-377.15	4,045.72	3,865.29	0.74	-0.33	0.67
11,184.00	88.50	98.10	7,345.87	-381.44	4,077.41	3,895.28	4.00	3.13	2.50
11,216.00	89.40	98.50	7,346.45	-386.06	4,109.07	3,925.16	3.08	2.81	1.25
11,248.00	89.50	98.60	7,346.76	-390.82	4,140.71	3,955.00	0.44	0.31	0.31
11,278.00	89.40	98.80	7,347.05	-395.35	4,170.36	3,982.94	0.75	-0.33	0.67
11,310.00	89.00	98.70	7,347.49	-400.22	4,201.99	4,012.73	1.29	-1.25	-0.31
11,342.00	88.60	98.00	7,348.16	-404.87	4,233.64	4,042.61	2.52	-1.25	-2.19
11,374.00	88.90	98.70	7,348.86	-409.51	4,265.29	4,072.48	2.38	0.94	2.19
Last MWD Survey									
11,420.00	88.90	98.70	7,349.75	-416.47	4,310.76	4,115.32	0.00	0.00	0.00
Proj. To Bit									



Black Viper Energy
Survey Report



Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Nitro 11 Federal #1H
Project:	Eddy Co. New Mexico	TVD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Site:	Nitro 11 Federal #1H	MD Reference:	Rig KB @ 3741.00ft (Key #115 KB)
Well:	Nitro 11 Federal #1H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	Database:	EDM 2003.14.1:0 Server DB

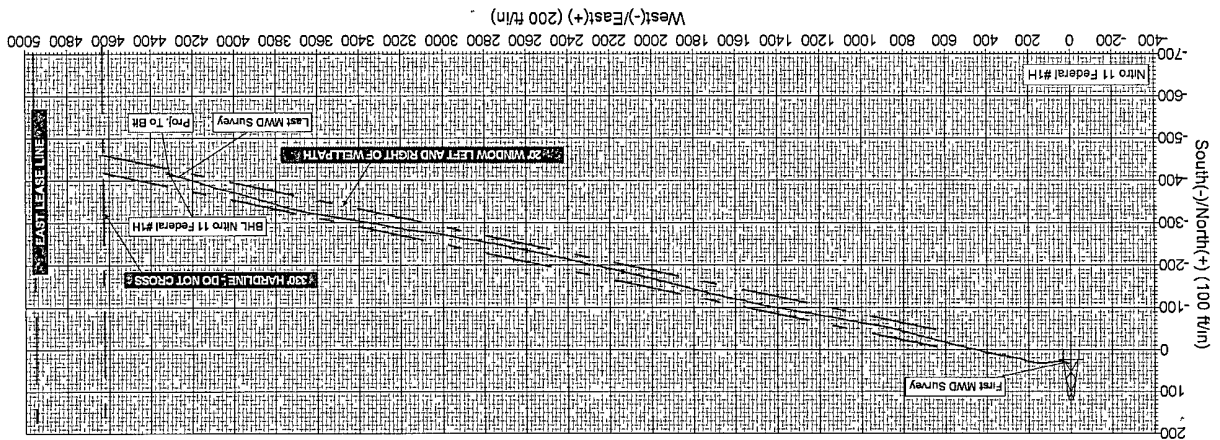
Targets										
Target Name:	hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL#1[N11Fed1H]		0.00	0.00	7,262.00	-411.28	4,310.76	705,089.49	631,975.28	32° 56' 16.619 N	104° 2' 16.439 W
- survey misses by 87.86ft at 11417.53ft MD (7349.70 TVD, -416.10 N, 4308.32 E)										
- Point										
BHL Nitro 11 Federal #1		0.00	0.00	7,349.75	-416.47	4,310.76	705,084.30	631,975.28	32° 56' 16.567 N	104° 2' 16.439 W
- survey hits target										
- Point										
PBHL#2 [N11Fed1H]		2.30	95.17	7,342.00	-411.25	4,310.44	705,089.52	631,974.97	32° 56' 16.619 N	104° 2' 16.443 W
- survey misses by 9.26ft at 11418.75ft MD (7349.72 TVD, -416.28 N, 4309.52 E)										
- Point										
PBHL#3 [N11Fed1H]		0.00	0.00	7,301.58	-411.25	4,310.44	705,089.52	631,974.96	32° 56' 16.619 N	104° 2' 16.443 W
- survey misses by 48.41ft at 11417.97ft MD (7349.71 TVD, -416.16 N, 4308.75 E)										
- Point										

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
6,987.00	6,984.68	30.60	23.83	First MWD Survey	
11,374.00	7,348.86	-409.51	4,265.29	Last MWD Survey	
11,420.00	7,349.75	-416.47	4,310.76	Proj. To Bit	

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy Co., New Mexico
Site: Nitro 11 Federal #1H
Well: Nitro 11 Federal #1H
Wellbore: Lateral
Survey: MWD Survey #1 (Nitro 11 Federal #1H/Lateral)



PROJECT DETAILS Eddy Co., New Mexico
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level



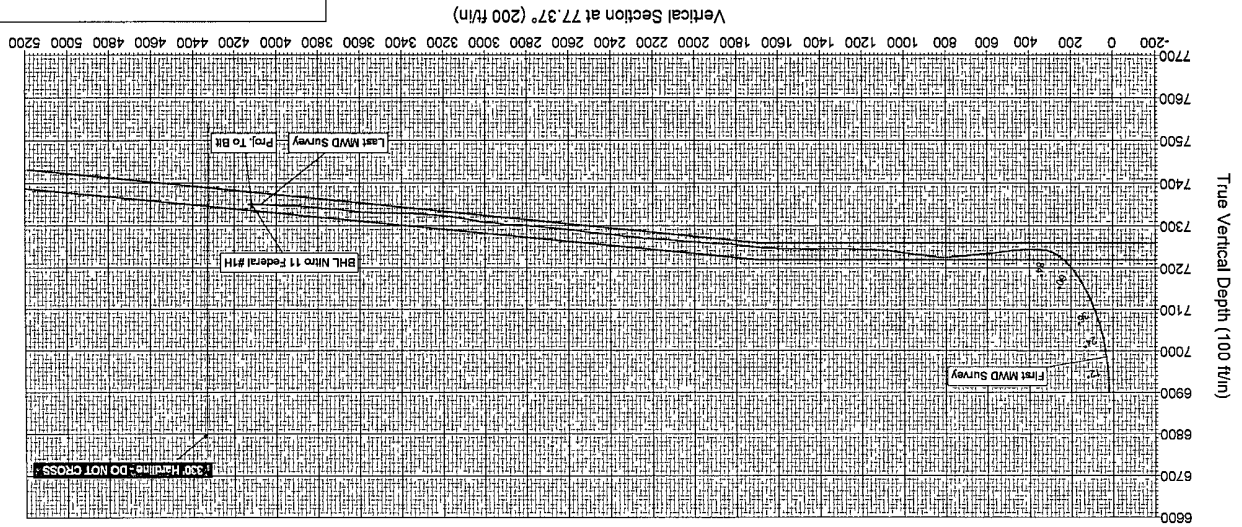
Azimuths to Grid North
True North: -0.15°
Magnetic North: 8.13°
Magnetic Field
Strength: 49376 nT
Dip Angle: 60.86°
Date: 1/1/2007
Model: IGRF200510

SECTION DETAILS

No plan data is available

ANNOTATIONS

TVD	MD	Annotation
6984.68	6987.00	First MWD Survey
7348.86	11374.00	Last MWD Survey
7349.75	11420.00	Proj. To Bit



Survey: MWD Survey #1 (Nitro 11 Federal #1H/Lateral)
Created By: LD Burton
Date: November 23, 2007

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NOT TO BE DISCLOSED OUTSIDE
**** Cimarex Energy ****