

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

S

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other		5. Lease Serial No. SHL NM-012128 BHL NM-97874	
b. Type of Completion: ☐ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other <u>Horizontal Re-entry</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. Pending	
3. Address PO Box 140907; Irving, TX 75014		8. Lease Name and Well No. Conoco 22 Federal Com No. 1	
3a. Phone No. (include area code) 972-443-6489		9. API Well No. 30-015-31457 <u>SI</u>	
4. Location of Well (Report Location clearly and in accordance with Federal requirements)* At surface 2303' FNL & 1427' FWL At top prod. interval reported below 2299' FNL & 1504' FWL At total depth 1956' FNL & 408' FEL		10. Field and Pool, or Exploratory County Line Tank; Abo	
14. Date Spudded 01.10.01		15. Date T.D. Reached 01.13.08	
16. Date Completed ☐ D & A ☒ Ready to Prod.		17. Elevations (DF, RKB, RT, GL)* 3667' GR	
18. Total Depth: MD 10,640' TVD 7,232'		19. Plug Back TD: MD 10,359' TVD 7,218'	
20. Depth Bridge Plug Set: MD 6,709' TVD		21. Type Electric & Other Mechanical Logs Run (Submit copy of each) Multiple Array Acoustilog	
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)	

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
14 1/2"	*11 1/2" H-40	42	0'	432'		775 sx PremPlus		circ	
11"	*8 3/4" J-55	32	0'	2,690'		750 sx Interfill		circ	
7 7/8"	5 1/2" N-80	17	0'	7,503'		1075 sx Inth/PBSH		1,250'	
4 3/4"	3 1/2" P-110	6.5	6,875'	10,359'		no cement			
*Casing set by EOG Resources in 01-01									

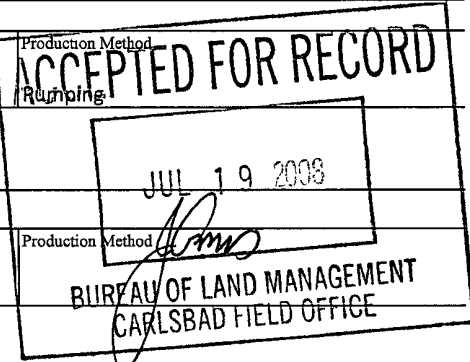
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 7/8"	6,817'							

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Abo	7,190'	7,267'				
B)						
C)						
D)						

Depth Interval	Amount and Type of Material
	Please see attachment...

28 Production - Interval A									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
03.07.08	03.24.08	24	→	11	2	3	41.5	1.426	Ramping
Choke Size	Tbg Press Flwg	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
20/64	SI 250	60	→				182	Producing	
28 Production - Interval B									
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		→						

* (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
				San Andres	2,576'
				Abo	6,063'
				Base Anhydrite	7,311'
				Wolfcamp	7,379'

32. Additional remarks (include plugging procedure):

2 1/2"x2"x20' RHBC rod pump installed.

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: PEAK Systems Drawing, TOC Calculation, Frac Job

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 Analyst

Signature *Natalie Krueger* Date June 13, 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.

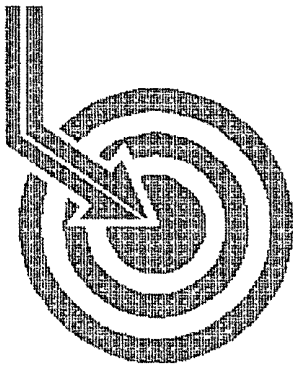
Acid, Fracture, Treatment, Cement Squeeze, etc. Attachment

Conoco 22 Federal Com No. 1

22-16S-29E

Eddy County, NM

Depth Interval	Amount and Type of Material Used
10057'-10640'	Pump 119 bbl of 15% HCl NeFe acid, 238 bbl slickwater, SD, 357 bbl Deepspot 15% HCl acid, 376 bbl slickwater, 238 bbl Lightning 2000 x-linker pad, 0.5 to 1 ppg 30/50# white sand on lightning 2000 gel, 10.5 to 2 ppg 20/40# white sand on lightning 2000 gel & flush with 20# linear gel. Pumped down 5½" csg, 3½" & 2¾" liner 37 BPM. Drop 1½" ball. Pump 119 bbl of 15% HCl NeFe acid & NeFe acid & 86 bbl slickwater, seat ball, open port at 9793' at 4490#. 15000# 30/50 sand & 35000# 20/40 sand pumped.
9495'-10057'	Cont pumping 100 bbl slickwater, SD, 171 bbl slickwater, 238 bbl Deepspot 15% HCl acid, 476 bbl slickwater, 238 bbl Lightning 2000 x-linker pad, 0.5 ppg 30/50# white sand 595 bbl slick water, 244 bbl Lightning 2000 x-linker pad, 1 ppg 30/50 white sand & flush with 20# linear gel. Drop 1¼" ball. Pump 119 bbl 15% HCl NeFe acid, 83 bbl slickwater, seat ball, open port 9295' at 4591#. Avg rate 430.5 BPM. 15000# 30/50 sand pumped.
9130'-9495'	Cont pumping 100 bbl slickwater, SD, 119 bbl Deepspot 15% HCl acid, 439 bbl slickwater, 238 bbl Lightning 2000 x-linker pad, 0.5 ppg 30/50# white sand, 357 bbl slickwater, 238 bbl Lightning 2000 x-linker pad, 0.75 ppg 30/50# white sand & flush flush with 20# linear gel. Drop 2" ball. Pump 119 bbl 15% HCl NeFe acid, 90 bbl slickwater, seat ball, open port at 8769' at 4856#. Avg rate 50 BPM. 6250# 30/50# sand pumped.
8381'-9130'	Cont pumping 100 bbl slickwater, SD, 238 bbl Deepspot 15% HCl acid, 702 bbl slickwater, 476 bbl Deepspot 15%HCl acid, 595 bbl slickwater, 238 bbl Lightning 2000 x-linker pad, 0.5 to 1 ppg 30/50# white sand, 10.5 to 2 ppg 20/40# white sand & flush with 20# linear gel. Drop 2.25" ball. Pump 225 bbl 15% NeFe acid, 70 bbl slickwater, seat ball, open port at 7808' with 4558#. Avg rate 57 BPM. 15000 30/50# & 25000 20/40# sand pumped.
7266'-8381'	Cont pumping 100 bbl slickwater, SD, 423 bbl slickwater, 357 bbl Deepspot 15% HCl acid, 931 bbl slickwater, 931 bbl Deepspot 15% HCl acid, 952 bbl slickwater, 238 bbl lightning 2000 x-linker, 0.5 to 1 ppg 30/50 white sand, 714 bbl slickwater, 238 bbl lightning 2000 x-linker, 0.5 to 1 ppg 20/40 white sand, & flush with 167 bbl of 20# linear gel. Avg rate 61 BPM. 15000 30/50# & 15000 20/40# sand pumped.



Scientific Drilling

CIMAREX ENERGY

Field: County Line Tank
Site: Eddy County, NM
Well: Conoco 22 Federal #1H
Wellpath: VH - Job #32K12071157
Survey: 12/23/07

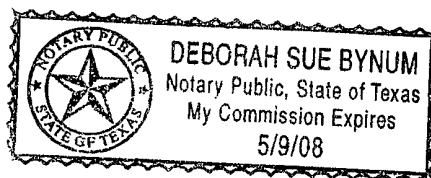
This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*L. Wharton*..... Company Representative

Notorized this date 22nd of January, 2008.

Deborah Sue Bynum

Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: CIMAREX ENERGY	Date: 01/21/2008	Time: 15:19:45	Page: 1
Field: County Line Tank	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Conoco 22 Federal #1H	Section (VS) Reference:	Well (0.00N,0.00E,84.51Azi)	
Wellpath: VH - Job #32K12071157	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 12/23/07	Start Date: 12/23/2007
KSRG 0'-7414'	
Company: Scientific Drilling Internatio	Engineer: Madrid w/GeoGyro
Tool: Keeper;Keeper Gyro	Tied-to: From Surface

Survey

MD ft	Incl deg	Azlm deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	359.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.96	264.63	100.00	-0.84	-0.08	-0.83	0.96	0.84	264.63
200.00	1.50	234.62	199.97	-2.81	-0.91	-2.74	0.82	2.88	251.51
300.00	1.03	262.82	299.95	-4.84	-1.78	-4.69	0.77	5.02	249.18
400.00	0.87	288.64	399.94	-6.43	-1.65	-6.31	0.45	6.52	255.30
500.00	0.56	307.77	499.93	-7.48	-1.11	-7.41	0.39	7.49	261.46
600.00	0.58	290.19	599.92	-8.30	-0.64	-8.27	0.18	8.30	265.59
700.00	0.71	312.01	699.92	-9.17	-0.05	-9.21	0.28	9.21	269.69
800.00	0.27	358.97	799.91	-9.57	0.60	-9.67	0.56	9.69	273.56
900.00	0.39	335.79	899.91	-9.66	1.15	-9.82	0.18	9.88	276.67
1000.00	0.37	356.17	999.91	-9.76	1.78	-9.98	0.14	10.13	280.11
1100.00	0.54	344.86	1099.91	-9.83	2.56	-10.12	0.19	10.44	284.18
1200.00	0.47	342.15	1199.90	-10.00	3.40	-10.37	0.07	10.91	288.16
1300.00	0.49	354.20	1299.90	-10.09	4.22	-10.54	0.10	11.35	291.81
1400.00	0.30	12.36	1399.90	-10.01	4.90	-10.53	0.23	11.61	294.96
1500.00	0.20	6.58	1499.90	-9.89	5.33	-10.45	0.10	11.73	297.01
1600.00	0.34	348.37	1599.89	-9.89	5.79	-10.49	0.16	11.98	298.90
1700.00	0.58	343.50	1699.89	-10.02	6.57	-10.69	0.24	12.55	301.56
1800.00	0.64	320.58	1799.89	-10.43	7.48	-11.19	0.25	13.46	303.77
1900.00	0.80	351.42	1899.88	-10.77	8.61	-11.65	0.41	14.49	306.45
2000.00	0.65	350.36	1999.87	-10.85	9.86	-11.85	0.15	15.41	309.75
2100.00	0.73	343.77	2099.86	-11.01	11.03	-12.12	0.11	16.39	312.29
2200.00	0.87	336.48	2199.85	-11.37	12.33	-12.60	0.17	17.64	314.38
2300.00	0.88	335.89	2299.84	-11.85	13.73	-13.22	0.01	19.06	316.08
2400.00	0.89	343.29	2399.83	-12.24	15.18	-13.76	0.11	20.48	317.81
2500.00	0.61	348.64	2499.82	-12.45	16.44	-14.09	0.29	21.65	319.41
2600.00	0.59	345.32	2599.82	-12.59	17.46	-14.32	0.04	22.58	320.64
2700.00	0.62	345.69	2699.81	-12.75	18.48	-14.59	0.03	23.55	321.72
2800.00	0.70	340.57	2799.80	-12.98	19.58	-14.92	0.10	24.62	322.69
2900.00	0.79	335.83	2899.79	-13.35	20.79	-15.41	0.11	25.88	323.46
3000.00	0.75	339.68	2999.79	-13.74	22.03	-15.92	0.07	27.18	324.15
3100.00	0.69	327.09	3099.78	-14.18	23.15	-16.47	0.17	28.41	324.57
3200.00	0.69	328.70	3199.77	-14.72	24.17	-17.11	0.02	29.62	324.70
3300.00	0.74	342.22	3299.76	-15.12	25.30	-17.62	0.18	30.83	325.14
3400.00	0.86	341.35	3399.75	-15.43	26.63	-18.06	0.12	32.17	325.85
3500.00	1.02	340.68	3499.74	-15.81	28.18	-18.59	0.16	33.76	326.58
3600.00	0.99	338.44	3599.72	-16.26	29.82	-19.21	0.05	35.47	327.22
3700.00	0.87	337.05	3699.71	-16.73	31.32	-19.82	0.12	37.07	327.68
3800.00	0.82	332.17	3799.70	-17.23	32.66	-20.45	0.09	38.53	327.94
3900.00	0.84	332.11	3899.69	-17.78	33.94	-21.13	0.02	39.98	328.10
4000.00	0.96	324.44	3999.68	-18.48	35.27	-21.96	0.17	41.54	328.09
4100.00	0.92	316.27	4099.66	-19.40	36.53	-23.00	0.14	43.16	327.80
4200.00	0.93	302.26	4199.65	-20.54	37.54	-24.24	0.23	44.69	327.15
4300.00	0.79	297.86	4299.64	-21.75	38.30	-25.54	0.15	46.03	326.31
4400.00	0.84	300.82	4399.63	-22.92	38.99	-26.77	0.07	47.30	325.53
4500.00	0.95	296.55	4499.62	-24.21	39.74	-28.15	0.13	48.70	324.69
4600.00	1.03	290.61	4599.60	-25.72	40.43	-29.73	0.13	50.18	323.67
4700.00	0.85	297.00	4699.59	-27.16	41.08	-31.23	0.21	51.60	322.76
4800.00	0.87	304.37	4799.58	-28.37	41.85	-32.52	0.11	52.99	322.15



Scientific Drilling International Survey Report

Company: CIMAREX ENERGY
Field: County Line Tank
Site: Eddy County, NM
Well: Conoco 22 Federal #1H
Wellpath: VH - Job #32K12071157

Date: 01/21/2008 Time: 15:19:45 Page: 2
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,84.51Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

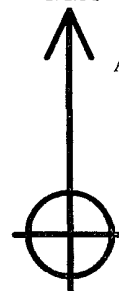
MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.00	0.92	302.50	4899.57	-29.58	42.71	-33.82	0.06	54.48	321.62
5000.00	0.95	299.90	4999.55	-30.89	43.55	-35.22	0.05	56.01	321.04
5100.00	0.66	286.83	5099.54	-32.10	44.13	-36.49	0.34	57.26	320.42
5200.00	0.84	287.66	5199.53	-33.30	44.52	-37.74	0.18	58.36	319.71
5300.00	0.91	291.46	5299.52	-34.69	45.03	-39.17	0.09	59.69	318.98
5400.00	0.99	278.29	5399.51	-36.23	45.45	-40.77	0.23	61.05	318.11
5500.00	0.98	276.61	5499.49	-37.91	45.67	-42.47	0.03	62.37	317.08
5600.00	1.17	275.34	5599.48	-39.75	45.86	-44.34	0.19	63.79	315.97
5700.00	0.97	272.89	5699.46	-41.59	46.00	-46.20	0.21	65.20	314.88
5800.00	0.90	276.02	5799.45	-43.19	46.13	-47.83	0.09	66.45	313.96
5900.00	0.73	262.61	5899.44	-44.60	46.13	-49.24	0.25	67.47	313.13
6000.00	0.71	255.14	5999.43	-45.85	45.89	-50.47	0.10	68.21	312.28
6100.00	0.51	251.75	6099.42	-46.89	45.59	-51.49	0.20	68.77	311.52
6200.00	0.47	254.28	6199.42	-47.73	45.34	-52.31	0.05	69.22	310.92
6300.00	0.40	257.68	6299.42	-48.48	45.15	-53.05	0.07	69.66	310.40
6400.00	0.35	274.50	6399.41	-49.13	45.10	-53.69	0.12	70.12	310.03
6500.00	0.36	265.94	6499.41	-49.74	45.10	-54.31	0.05	70.60	309.71
6600.00	0.07	71.90	6599.41	-50.00	45.10	-54.56	0.43	70.79	309.57
6700.00	0.18	129.92	6699.41	-49.83	45.02	-54.39	0.15	70.60	309.62
6800.00	0.57	129.76	6799.41	-49.37	44.60	-53.88	0.39	69.95	309.61
6900.00	0.43	151.29	6899.40	-48.87	43.95	-53.32	0.23	69.10	309.50
7000.00	0.39	126.44	6999.40	-48.47	43.42	-52.87	0.18	68.41	309.40
7100.00	0.62	146.58	7099.40	-47.96	42.77	-52.29	0.29	67.55	309.28
7200.00	0.49	152.76	7199.39	-47.55	41.93	-51.80	0.14	66.65	308.99
7300.00	0.27	124.83	7299.39	-47.21	41.42	-51.41	0.28	66.02	308.86
7400.00	0.23	190.24	7399.39	-47.09	41.09	-51.25	0.27	65.69	308.72
7414.00	0.68	172.18	7413.39	-47.09	40.98	-51.25	3.33	65.62	308.65



Scientific
Drilling

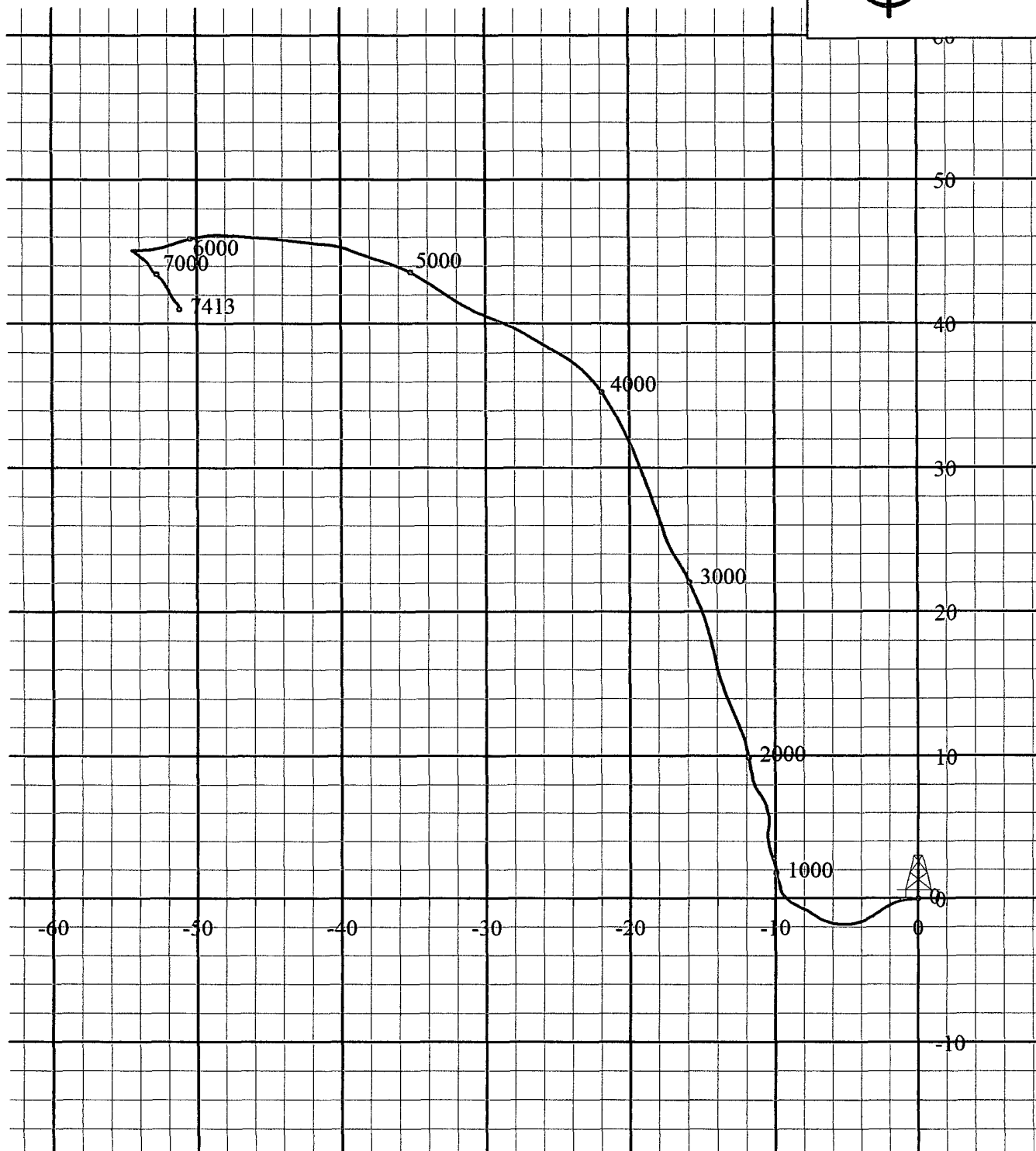
Field: County Line Tank
Site: Eddy County, NM
Well: Conoco 22 Federal #1H
Wellpath: VH - Job #32K12071157
Survey: 12/23/07

G/T/M



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 01/21/2008
Model: igrf2000



South(-)/North(+) [10ft/in]

West(-)/East(+) [10ft/in]

Calculation of Cement Top - Production Casing String
Conoco 22 Federal Com No. 1
 22-16S-29E
 Eddy County, NM

Caluculated using 100% Excess Factor

	sx	yeild	volume,ft3
Lead	375	2.79	1046.3
Tail	700	1.62	1134
			<u>2180.3</u>

Volume factors			
(tubular) Inside 5 1/2"	0.0232 ft3/ft		
(annular) 5 1/2" X 7 7/8" hole	0.1733 ft3/ft	with 100% loss	0.3465 ft3/ft
(annular) 5 1/2" X 8 5/8" csg	0.1772 ft3/ft	with 100% loss	0.3544 ft3/ft

Inside 5 1/2" (tail)

Length, ft	90
Volume , ft3	2.0922
Remaining tail, ft3	1131.9

5 1/2" X 7 7/8"

Tail RemaingVol, ft3	1131.9
Length, ft (tail)	3266.6
TOT Depth, ft	4236.4
Length, ft (TOT to int)	1546.4
Volume	535.84
Remaining lead, ft3	510.41

5 1/2" X 8 5/8"

Remaing lead Vol, ft3	510.41
Length, ft	1440
depth, ft	1250

DISTRICT I

1625 N. French Dr., Hobbs, NM 88240

DISTRICT II

1301 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 DepartmentForm C-102
Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-31457	Pool Code 97197	Pool Name County Line Tank; Abo
Property Code	Property Name CONOCO "22" FEDERAL COM	Well Number 1
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3667'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	22	16 S	29 E		2303	NORTH	1427	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	22	16 S	29 E		1956	NORTH	408	EAST	EDDY
Dedicated Acres 160	Joint or Infill	Consolidation Code P	Order No. NSL 5712						

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

SURFACE LOCATION Lat - N32°54'29.09" Long - W104°03'59.78" NMSPCE-- N 694195.516 E 623197.327 (NAD-83) PENETRATION POINT ABO 2299' FNL & 1504' FWL	OPERATOR CERTIFICATION I hereby certify that the information contained 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 pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Zeno Farris</i> 06-13-08 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. AUGUST 1, 2007 Date Surveyed <i>Gary L. Jones</i> Signature & Seal Professional Surveyor Certificate No. Gary L. Jones 7977 Basin Surveys
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Cimarex Energy Co., Inc.

Eddy Co., New Mexico

Conoco '22' Federal Com #1

Conoco '22' Federal Com #1

Lateral #1

Survey: MWD Survey #1

Standard Survey Report

16 January, 2008

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Conoco '22' Federal Com #1
Project:	Eddy Co., New Mexico	TVD Reference:	WELL @ 3670.00ft (Original Well Elev)
Site:	Conoco '22' Federal Com #1	MD Reference:	WELL @ 3670.00ft (Original Well Elev)
Well:	Conoco '22' Federal Com #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 2003:14 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:	Conoco '22' Federal Com #1		
Site Position:		Northing:	694,195.52 ft
From:	Map	Easting:	623,197.33 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	32° 54' 29.056 N
		Longitude:	104° 3' 59.765 W
		Grid Convergence:	0.14 °

Well:	Conoco '22' Federal Com #1					
Well Position	+N/-S	0.00 ft	Northing:	694,195.52 ft	Latitude:	32° 54' 29.056 N
	+E/-W	0.00 ft	Easting:	623,197.33 ft	Longitude:	104° 3' 59.765 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
			(°)	(°)	(nT)
	IGRF200510	8/6/2007	8.31	60.84	49,352

Design:		Lateral #1		
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 6,990.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	84.51

Survey Program		Date: 1/16/2008		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100.00	6,990.00	Gyro Survey (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s
6,990.00	10,640.00	MWD Survey #1 (Lateral #1)	MWD	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)
6,990.00	0.39	129.36	6,989.40	43.46	-52.92	-48.52	0.00	0.00	0.00
7,034.00	14.20	118.80	7,032.94	40.75	-48.05	-43.93	31.40	31.39	-24.00
First MWD Survey									
7,044.00	16.80	114.50	7,042.57	39.56	-45.66	-41.67	28.41	26.00	-43.00
7,054.00	19.00	114.50	7,052.09	38.29	-42.86	-39.00	22.00	22.00	0.00
7,066.00	21.70	111.90	7,063.34	36.65	-39.03	-35.34	23.72	22.50	-21.67
7,076.00	24.10	110.00	7,072.55	35.26	-35.39	-31.86	25.11	24.00	-19.00
7,086.00	26.70	109.20	7,081.58	33.82	-31.35	-27.97	26.22	26.00	-8.00
7,098.00	29.90	108.70	7,092.15	31.98	-25.97	-22.79	26.74	26.67	-4.17
7,108.00	32.90	108.40	7,100.68	30.32	-21.03	-18.04	30.04	30.00	-3.00
7,118.00	35.00	107.50	7,108.98	28.60	-15.72	-12.91	21.59	21.00	-9.00
7,130.00	37.70	107.10	7,118.64	26.49	-8.93	-6.35	22.59	22.50	-3.33

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Conoco '22' Federal Com #1
Project:	Eddy Co., New Mexico	TVD Reference:	WELL @ 3670.00ft (Original Well Elev)
Site:	Conoco '22' Federal Com #1	MD Reference:	WELL @ 3670.00ft (Original Well Elev)
Well:	Conoco '22' Federal Com #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 2003:14 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)
7,140.00	41.20	105.80	7,126.36	24.69	-2.84	-0.46	35.96	35.00	-13.00
7,150.00	44.10	104.70	7,133.72	22.91	3.70	5.87	29.94	29.00	-11.00
7,162.00	46.00	104.20	7,142.19	20.79	11.92	13.86	16.11	15.83	-4.17
7,172.00	45.80	106.20	7,149.15	18.91	18.85	20.58	14.50	-2.00	20.00
7,182.00	47.30	106.60	7,156.03	16.86	25.82	27.31	15.28	15.00	4.00
7,193.00	50.60	107.80	7,163.25	14.40	33.74	34.96	31.11	30.00	10.91
7,203.00	53.30	105.60	7,169.42	12.15	41.28	42.25	32.08	27.00	-22.00
7,213.00	56.40	104.70	7,175.17	10.01	49.17	49.91	31.86	31.00	-9.00
7,225.00	60.50	102.70	7,181.45	7.59	59.11	59.56	37.00	34.17	-16.67
7,235.00	63.80	100.50	7,186.12	5.82	67.77	68.01	38.30	33.00	-22.00
7,245.00	67.20	98.30	7,190.27	4.33	76.74	76.80	39.45	34.00	-22.00
7,257.00	70.60	95.40	7,194.59	3.00	87.85	87.74	36.21	28.33	-24.17
7,267.00	73.50	92.50	7,197.67	2.35	97.34	97.12	40.02	29.00	-29.00
7,277.00	76.40	90.40	7,200.27	2.11	107.00	106.71	35.39	29.00	-21.00
7,322.00	84.90	79.90	7,207.59	5.90	151.13	151.00	29.76	18.89	-23.33
7,354.00	84.10	80.80	7,210.66	11.24	182.53	182.77	3.75	-2.50	2.81
7,386.00	88.90	80.90	7,212.61	16.32	214.05	214.63	15.00	15.00	0.31
7,418.00	88.80	80.70	7,213.26	21.43	245.64	246.56	0.70	-0.31	-0.63
7,450.00	88.30	80.20	7,214.07	26.74	277.18	278.47	2.21	-1.56	-1.56
7,481.00	90.40	79.90	7,214.42	32.10	307.71	309.37	6.84	6.77	-0.97
7,513.00	90.01	80.00	7,214.30	37.68	339.22	341.27	1.26	-1.22	0.31
7,545.00	90.00	80.00	7,214.30	43.24	370.74	373.17	0.03	-0.03	0.00
7,577.00	90.00	79.80	7,214.30	48.85	402.24	405.07	0.63	0.00	-0.63
7,609.00	89.30	79.40	7,214.49	54.62	433.71	436.95	2.52	-2.19	-1.25
7,640.00	89.10	78.80	7,214.93	60.49	464.15	467.81	2.04	-0.65	-1.94
7,672.00	88.80	78.40	7,215.51	66.81	495.51	499.63	1.56	-0.94	-1.25
7,704.00	88.30	78.30	7,216.32	73.27	526.84	531.44	1.59	-1.56	-0.31
7,736.00	88.10	78.70	7,217.33	79.65	558.19	563.25	1.40	-0.63	1.25
7,767.00	88.20	78.60	7,218.33	85.74	588.56	594.07	0.46	0.32	-0.32
7,799.00	88.80	78.70	7,219.17	92.04	619.93	625.89	1.90	1.88	0.31
7,831.00	90.20	79.20	7,219.45	98.17	651.33	657.74	4.65	4.38	1.56
7,863.00	91.30	79.50	7,219.03	104.09	682.78	689.60	3.56	3.44	0.94
7,895.00	91.00	79.50	7,218.39	109.92	714.24	721.48	0.94	-0.94	0.00
7,926.00	90.90	79.60	7,217.87	115.54	744.72	752.36	0.46	-0.32	0.32
7,958.00	92.20	80.40	7,217.01	121.09	776.22	784.24	4.77	4.06	2.50
7,990.00	92.60	81.00	7,215.67	126.26	807.77	816.14	2.25	1.25	1.88
8,022.00	92.00	81.50	7,214.38	131.12	839.37	848.07	2.44	-1.88	1.56
8,053.00	92.50	81.60	7,213.16	135.68	870.01	879.00	1.64	1.61	0.32
8,085.00	92.60	82.30	7,211.74	140.15	901.67	910.94	2.21	0.31	2.19
8,117.00	91.20	83.00	7,210.68	144.24	933.38	942.90	4.89	-4.38	2.19
8,149.00	91.00	82.80	7,210.07	148.20	965.13	974.88	0.88	-0.63	-0.63
8,181.00	90.90	82.70	7,209.54	152.24	996.87	1,006.86	0.44	-0.31	-0.31
8,212.00	90.90	82.90	7,209.05	156.12	1,027.62	1,037.85	0.65	0.00	0.65
8,244.00	90.80	82.90	7,208.57	160.08	1,059.38	1,069.83	0.31	-0.31	0.00
8,276.00	90.60	83.10	7,208.18	163.97	1,091.13	1,101.82	0.68	-0.63	0.63
8,308.00	92.00	84.10	7,207.46	167.54	1,122.93	1,133.80	5.38	4.38	3.13
8,340.00	92.10	84.60	7,206.31	170.69	1,154.75	1,165.78	1.59	0.31	1.56
8,372.00	91.60	84.80	7,205.28	173.64	1,186.60	1,197.77	1.68	-1.56	0.63
8,403.00	91.20	84.50	7,204.52	176.53	1,217.45	1,228.76	1.61	-1.29	-0.97
8,435.00	91.40	84.40	7,203.80	179.63	1,249.29	1,260.75	0.70	0.63	-0.31
8,467.00	90.40	84.40	7,203.29	182.75	1,281.14	1,292.74	3.13	-3.13	0.00
8,499.00	89.70	84.20	7,203.26	185.93	1,312.98	1,324.74	2.28	-2.19	-0.63
8,530.00	89.40	84.60	7,203.51	188.95	1,343.83	1,355.74	1.61	-0.97	1.29
8,562.00	90.50	85.00	7,203.54	191.85	1,375.70	1,387.74	3.66	3.44	1.25

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Conoco '22' Federal Com #1
Project:	Eddy Co - New Mexico	TVD Reference:	WELL @ 3670.00ft (Original Well Elev)
Site:	Conoco '22' Federal Com #1	MD Reference:	WELL @ 3670.00ft (Original Well Elev)
Well:	Conoco '22' Federal Com #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM:2003.14 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)
8,594.00	89.90	84.80	7,203.42	194.70	1,407.57	1,419.74	1.98	-1.88	-0.63
8,626.00	89.20	84.90	7,203.68	197.57	1,439.44	1,451.74	2.21	-2.19	0.31
8,658.00	91.00	85.70	7,203.62	200.19	1,471.33	1,483.73	6.16	5.63	2.50
8,689.00	90.10	85.20	7,203.32	202.65	1,502.23	1,514.73	3.32	-2.90	-1.61
8,721.00	89.70	86.00	7,203.38	205.11	1,534.14	1,546.72	2.80	-1.25	2.50
8,753.00	91.20	85.60	7,203.13	207.45	1,566.05	1,578.71	4.85	4.69	-1.25
8,785.00	90.80	87.50	7,202.57	209.37	1,597.98	1,610.68	6.07	-1.25	5.94
8,817.00	92.20	89.20	7,201.73	210.30	1,629.96	1,642.60	6.88	4.38	5.31
8,848.00	92.70	89.30	7,200.41	210.70	1,660.93	1,673.47	1.64	1.61	0.32
8,880.00	92.60	89.30	7,198.93	211.09	1,692.89	1,705.32	0.31	-0.31	0.00
8,912.00	92.70	89.60	7,197.45	211.40	1,724.85	1,737.17	0.99	0.31	0.94
8,945.00	92.20	89.00	7,196.04	211.80	1,757.82	1,770.02	2.37	-1.52	-1.82
8,975.00	92.00	88.50	7,194.94	212.46	1,787.79	1,799.92	1.79	-0.67	-1.67
9,007.00	91.10	88.40	7,194.07	213.32	1,819.77	1,831.83	2.83	-2.81	-0.31
9,039.00	90.90	88.60	7,193.51	214.16	1,851.75	1,863.75	0.88	-0.63	0.63
9,071.00	90.90	88.80	7,193.01	214.88	1,883.74	1,895.66	0.62	0.00	0.63
9,103.00	92.20	87.60	7,192.14	215.89	1,915.71	1,927.58	5.53	4.06	-3.75
9,134.00	92.30	87.60	7,190.93	217.19	1,946.66	1,958.51	0.32	0.32	0.00
9,166.00	92.90	85.90	7,189.48	219.00	1,978.58	1,990.45	5.63	1.88	-5.31
9,198.00	92.50	85.70	7,187.97	221.34	2,010.45	2,022.41	1.40	-1.25	-0.63
9,239.00	92.50	85.60	7,186.18	224.45	2,051.30	2,063.36	0.24	0.00	-0.24
9,261.00	92.70	85.70	7,185.18	226.11	2,073.21	2,085.33	1.02	0.91	0.45
9,293.00	92.50	85.80	7,183.73	228.48	2,105.09	2,117.29	0.70	-0.63	0.31
9,325.00	92.30	86.10	7,182.39	230.74	2,136.98	2,149.26	1.13	-0.63	0.94
9,357.00	92.10	86.30	7,181.16	232.86	2,168.89	2,181.22	0.88	-0.63	0.63
9,388.00	91.60	86.40	7,180.16	234.83	2,199.81	2,212.19	1.64	-1.61	0.32
9,420.00	89.90	86.20	7,179.74	236.90	2,231.74	2,244.17	5.35	-5.31	-0.63
9,452.00	89.90	86.40	7,179.80	238.96	2,263.67	2,276.15	0.63	0.00	0.63
9,484.00	90.00	85.70	7,179.83	241.17	2,295.60	2,308.14	2.21	0.31	-2.19
9,516.00	89.80	86.70	7,179.88	243.29	2,327.53	2,340.12	3.19	-0.63	3.13
9,547.00	89.50	87.10	7,180.07	244.96	2,358.48	2,371.10	1.61	-0.97	1.29
9,579.00	89.00	86.70	7,180.49	246.69	2,390.43	2,403.07	2.00	-1.56	-1.25
9,608.00	88.90	87.00	7,181.02	248.29	2,419.38	2,432.04	1.09	-0.34	1.03
9,643.00	88.30	86.80	7,181.88	250.18	2,454.32	2,467.00	1.81	-1.71	-0.57
9,675.00	87.60	86.50	7,183.02	252.05	2,486.24	2,498.95	2.38	-2.19	-0.94
9,738.00	87.20	86.70	7,185.88	255.78	2,549.07	2,561.85	0.71	-0.63	0.32
9,770.00	86.80	86.70	7,187.55	257.62	2,580.97	2,593.78	1.25	-1.25	0.00
9,801.00	86.60	86.30	7,189.34	259.51	2,611.86	2,624.71	1.44	-0.65	-1.29
9,832.00	86.20	86.40	7,191.28	261.48	2,642.74	2,655.63	1.33	-1.29	0.32
9,863.00	86.00	85.00	7,193.39	263.80	2,673.58	2,686.55	4.55	-0.65	-4.52
9,894.00	85.60	86.00	7,195.66	266.22	2,704.40	2,717.46	3.47	-1.29	3.23
9,929.00	85.30	86.00	7,198.44	268.66	2,739.20	2,752.34	0.86	-0.86	0.00
9,960.00	85.20	85.80	7,201.01	270.87	2,770.02	2,783.23	0.72	-0.32	-0.65
10,024.00	86.90	83.60	7,205.42	276.76	2,833.59	2,847.07	4.34	2.66	-3.44
10,056.00	86.60	83.60	7,207.23	280.33	2,865.34	2,879.01	0.94	-0.94	0.00
10,087.00	86.40	83.80	7,209.12	283.72	2,896.09	2,909.95	0.91	-0.65	0.65
10,119.00	87.00	83.10	7,210.97	287.36	2,927.83	2,941.89	2.88	1.88	-2.19
10,151.00	88.90	83.40	7,212.11	291.12	2,959.59	2,973.86	6.01	5.94	0.94
10,183.00	88.90	83.40	7,212.72	294.80	2,991.37	3,005.85	0.00	0.00	0.00
10,215.00	88.80	83.30	7,213.37	298.51	3,023.15	3,037.84	0.44	-0.31	-0.31
10,246.00	88.60	83.20	7,214.07	302.15	3,053.92	3,068.82	0.72	-0.65	-0.32
10,278.00	88.30	83.10	7,214.94	305.96	3,085.68	3,100.80	0.99	-0.94	-0.31
10,310.00	87.90	83.20	7,216.00	309.78	3,117.44	3,132.77	1.29	-1.25	0.31
10,342.00	88.00	83.60	7,217.14	313.45	3,149.20	3,164.75	1.29	0.31	1.25
10,373.00	87.90	83.80	7,218.25	316.85	3,180.00	3,195.73	0.72	-0.32	0.65

Black Viper Energy

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Well:	Conoco '22' Federal Com #1	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 2003.14 Server Db

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)
10,405.00	87.90	83.40	7,219.42	320.42	3,211.78	3,227.70	1.25	0.00	-1.25
10,437.00	87.50	83.50	7,220.71	324.07	3,243.54	3,259.67	1.29	-1.25	0.31
10,469.00	87.00	83.70	7,222.24	327.63	3,275.31	3,291.63	1.68	-1.56	0.63
10,500.00	87.00	83.40	7,223.86	331.11	3,306.07	3,322.58	0.97	0.00	-0.97
10,537.00	86.90	83.80	7,225.83	335.22	3,342.79	3,359.52	1.11	-0.27	1.08
10,564.00	86.70	83.60	7,227.34	338.18	3,369.58	3,386.48	1.05	-0.74	-0.74
10,596.00	86.50	83.60	7,229.24	341.74	3,401.32	3,418.42	0.63	-0.63	0.00
10,603.00	86.40	83.50	7,229.67	342.53	3,408.27	3,425.40	2.02	-1.43	-1.43
Last MWD Survey									
10,640.00	86.50	83.50	7,231.96	346.71	3,444.96	3,462.33	0.27	0.27	0.00
Proj. to Bit									

Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL#2[C22FedCom1]	- survey misses by 42.68ft at 10406.45ft MD (7219.48 TVD, 320.58 N, 3213.22 E)	0.00	0.00	7,180.36	337.65	3,212.84	694,533.17	626,410.17	32° 54' 32.315 N	104° 3' 22.067 W
PBHL#1[C22FedCom1]	- survey misses by 72.13ft at 10640.00ft MD (7231.96 TVD, 346.71 N, 3444.96 E)	0.00	0.00	7,254.62	337.65	3,512.84	694,533.17	626,710.17	32° 54' 32.307 N	104° 3' 18.548 W
PBHL#1a[C22FedCom1]	- survey misses by 73.24ft at 10640.00ft MD (7231.96 TVD, 346.71 N, 3444.96 E)	0.00	0.00	7,206.00	337.65	3,512.84	694,533.17	626,710.17	32° 54' 32.307 N	104° 3' 18.548 W

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates	+N/-S (ft)	+E/-W (ft)	Comment
7,034.00	7,032.94	40.75	-48.05		First MWD Survey
10,603.00	7,229.67	342.53	3,408.27		Last MWD Survey
10,640.00	7,231.96	346.71	3,444.96		Proj. to Bit

Checked By: _____ Approved By: _____ Date: _____

Cimarex Energy Co., Inc.
 Conoco '22' Federal Com #1 - Lateral #1

Eddy Co., New Mexico
 Conoco '22' Federal Com #1
 Your Ref:

Measured Dogleg Depth Rate (ft) (°/100ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00
0.00						
100.00	0.960	264.630	100.00	0.08 S	0.83 W	-0.84
0.96						
200.00	1.500	234.620	199.97	0.91 S	2.74 W	-2.81
0.82						
300.00	1.030	262.820	299.95	1.78 S	4.69 W	-4.84
0.77						
400.00	0.870	288.640	399.94	1.65 S	6.31 W	-6.43
0.45						
500.00	0.560	307.770	499.93	1.11 S	7.41 W	-7.48
0.39						
600.00	0.580	290.190	599.92	0.64 S	8.27 W	-8.30
0.18						
700.00	0.710	312.010	699.92	0.05 S	9.21 W	-9.17
0.28						
800.00	0.270	358.970	799.91	0.60 N	9.67 W	-9.57
0.56						
900.00	0.390	335.790	899.91	1.15 N	9.82 W	-9.66
0.18						
1000.00	0.370	356.170	999.91	1.78 N	9.98 W	-9.76
0.14						
1100.00	0.540	344.860	1099.91	2.56 N	10.12 W	-9.83
0.19						
1200.00	0.470	342.150	1199.90	3.40 N	10.37 W	-10.00
0.07						
1300.00	0.490	354.200	1299.90	4.22 N	10.54 W	-10.09
0.10						
1400.00	0.300	12.360	1399.90	4.90 N	10.53 W	-10.01
0.23						
1500.00	0.200	6.580	1499.90	5.33 N	10.45 W	-9.89
0.10						
1600.00	0.340	348.370	1599.89	5.79 N	10.49 W	-9.89
0.16						
1700.00	0.580	343.500	1699.89	6.57 N	10.69 W	-10.02
0.24						
1800.00	0.640	320.580	1799.89	7.48 N	11.19 W	-10.43
0.25						
1900.00	0.800	351.420	1899.88	8.61 N	11.65 W	-10.77
0.41						
2000.00	0.650	350.360	1999.87	9.86 N	11.85 W	-10.85
0.15						
2100.00	0.730	343.770	2099.86	11.03 N	12.12 W	-11.01
0.11						
2200.00	0.870	336.480	2199.85	12.33 N	12.60 W	-11.37
0.17						

2300.00	0.880	335.890	2299.84	13.73 N	13.22 W	-11.85
0.01						
2400.00	0.890	343.290	2399.83	15.18 N	13.76 W	-12.24
0.11						
2500.00	0.610	348.640	2499.82	16.44 N	14.09 W	-12.45
0.29						
2600.00	0.590	345.320	2599.82	17.46 N	14.32 W	-12.59
0.04						
2700.00	0.620	345.690	2699.81	18.48 N	14.59 W	-12.75
0.03						
2800.00	0.700	340.570	2799.80	19.58 N	14.92 W	-12.98
0.10						
2900.00	0.790	335.830	2899.79	20.79 N	15.41 W	-13.35
0.11						
3000.00	0.750	339.680	2999.79	22.03 N	15.92 W	-13.74
0.07						
3100.00	0.690	327.090	3099.78	23.15 N	16.47 W	-14.18
0.17						
3200.00	0.690	328.700	3199.77	24.17 N	17.11 W	-14.72
0.02						
3300.00	0.740	342.220	3299.76	25.30 N	17.62 W	-15.12
0.18						
3400.00	0.860	341.350	3399.75	26.63 N	18.06 W	-15.43
0.12						
3500.00	1.020	340.680	3499.74	28.18 N	18.59 W	-15.81
0.16						
3600.00	0.990	338.440	3599.72	29.82 N	19.21 W	-16.26
0.05						
3700.00	0.870	337.050	3699.71	31.32 N	19.82 W	-16.73
0.12						
3800.00	0.820	332.170	3799.70	32.66 N	20.45 W	-17.23
0.09						
3900.00	0.840	332.110	3899.69	33.94 N	21.13 W	-17.78
0.02						
4000.00	0.960	324.440	3999.68	35.27 N	21.96 W	-18.48
0.17						
4100.00	0.920	316.270	4099.66	36.53 N	23.00 W	-19.40
0.14						
4200.00	0.930	302.260	4199.65	37.54 N	24.24 W	-20.54
0.23						
4300.00	0.790	297.860	4299.64	38.30 N	25.54 W	-21.75
0.15						
4400.00	0.840	300.820	4399.63	38.99 N	26.77 W	-22.92
0.07						
4500.00	0.950	296.550	4499.62	39.74 N	28.15 W	-24.21
0.13						
4600.00	1.030	290.610	4599.60	40.43 N	29.73 W	-25.72
0.13						
4700.00	0.850	297.000	4699.59	41.08 N	31.23 W	-27.16
0.21						
4800.00	0.870	304.370	4799.58	41.85 N	32.52 W	-28.37
0.11						
4900.00	0.920	302.500	4899.57	42.71 N	33.82 W	-29.58
0.06						
5000.00	0.950	299.900	4999.55	43.55 N	35.22 W	-30.89
0.05						
5100.00	0.660	286.830	5099.54	44.13 N	36.49 W	-32.10
0.34						
5200.00	0.840	287.660	5199.53	44.52 N	37.74 W	-33.30
0.18						
5300.00	0.910	291.460	5299.52	45.03 N	39.17 W	-34.69
0.09						
5400.00	0.990	278.290	5399.51	45.45 N	40.77 W	-36.23
0.23						

5500.00	0.980	276.610	5499.49	45.67 N	42.47 W	-37.91
0.03						
5600.00	1.170	275.340	5599.48	45.86 N	44.34 W	-39.75
0.19						
5700.00	0.970	272.890	5699.46	46.00 N	46.20 W	-41.59
0.21						
5800.00	0.900	276.020	5799.45	46.13 N	47.83 W	-43.19
0.09						
5900.00	0.730	262.610	5899.44	46.13 N	49.24 W	-44.60
0.25						
6000.00	0.710	255.140	5999.43	45.89 N	50.47 W	-45.85
0.10						
6100.00	0.510	251.750	6099.42	45.59 N	51.49 W	-46.89
0.20						
6200.00	0.470	254.280	6199.42	45.34 N	52.31 W	-47.73
0.05						
6300.00	0.400	257.680	6299.42	45.15 N	53.05 W	-48.48
0.07						
6400.00	0.350	274.500	6399.41	45.10 N	53.69 W	-49.13
0.12						
6500.00	0.360	265.940	6499.41	45.10 N	54.31 W	-49.74
0.05						
6600.00	0.070	71.900	6599.41	45.10 N	54.56 W	-50.00
0.43						
6700.00	0.180	129.920	6699.41	45.02 N	54.39 W	-49.83
0.15						
6800.00	0.570	129.760	6799.41	44.60 N	53.88 W	-49.37
0.39						
6900.00	0.430	151.290	6899.40	43.95 N	53.32 W	-48.87
0.23						
6990.00	0.390	129.360	6989.40	43.46 N	52.92 W	-48.52
0.18						
7034.00	14.200	118.800	7032.94	40.75 N	48.05 W	-43.93
31.40						
7044.00	16.800	114.500	7042.58	39.56 N	45.66 W	-41.67
28.41						
7054.00	19.000	114.500	7052.09	38.29 N	42.87 W	-39.01
22.00						
7066.00	21.700	111.900	7063.34	36.65 N	39.03 W	-35.34
23.72						
7076.00	24.100	110.000	7072.55	35.26 N	35.39 W	-31.86
25.11						
7086.00	26.700	109.200	7081.59	33.82 N	31.35 W	-27.97
26.22						
7098.00	29.900	108.700	7092.15	31.98 N	25.97 W	-22.79
26.74						
7108.00	32.900	108.400	7100.68	30.32 N	21.03 W	-18.04
30.04						
7118.00	35.000	107.500	7108.98	28.60 N	15.72 W	-12.91
21.59						
7130.00	37.700	107.100	7118.64	26.49 N	8.93 W	-6.36
22.59						
7140.00	41.200	105.800	7126.36	24.69 N	2.84 W	-0.46
35.96						
7150.00	44.100	104.700	7133.72	22.91 N	3.70 E	5.87
29.94						
7162.00	46.000	104.200	7142.20	20.79 N	11.92 E	13.86
16.11						
7172.00	45.800	106.200	7149.16	18.91 N	18.85 E	20.57
14.50						
7182.00	47.300	106.600	7156.03	16.86 N	25.82 E	27.31
15.28						
7193.00	50.600	107.800	7163.26	14.41 N	33.74 E	34.96
31.11						

7203.00	53.300	105.600	7169.42	12.15 N	41.28 E	42.25
32.08						
7213.00	56.400	104.700	7175.18	10.01 N	49.17 E	49.90
31.86						
7225.00	60.500	102.700	7181.45	7.59 N	59.11 E	59.56
37.00						
7235.00	63.800	100.500	7186.13	5.82 N	67.76 E	68.01
38.30						
7245.00	67.200	98.300	7190.27	4.33 N	76.74 E	76.80
39.45						
7257.00	70.600	95.400	7194.59	3.00 N	87.85 E	87.74
36.21						
7267.00	73.500	92.500	7197.67	2.35 N	97.34 E	97.12
40.02						
7277.00	76.400	90.400	7200.27	2.11 N	106.99 E	106.71
35.39						
7322.00	84.900	79.900	7207.60	5.90 N	151.13 E	151.00
29.76						
7354.00	84.100	80.800	7210.66	11.24 N	182.53 E	182.77
3.75						
7386.00	88.900	80.900	7212.62	16.32 N	214.05 E	214.63
15.00						
7418.00	88.800	80.700	7213.26	21.43 N	245.64 E	246.56
0.70						
7450.00	88.300	80.200	7214.07	26.74 N	277.18 E	278.47
2.21						
7481.00	90.400	79.900	7214.42	32.10 N	307.71 E	309.37
6.84						
7513.00	90.010	80.000	7214.30	37.68 N	339.22 E	341.27
1.26						
7545.00	90.000	80.000	7214.30	43.24 N	370.73 E	373.17
0.03						
7577.00	90.000	79.800	7214.30	48.85 N	402.24 E	405.07
0.63						
7609.00	89.300	79.400	7214.50	54.63 N	433.71 E	436.95
2.52						
7640.00	89.100	78.800	7214.93	60.49 N	464.15 E	467.81
2.04						
7672.00	88.800	78.400	7215.52	66.81 N	495.51 E	499.63
1.56						
7704.00	88.300	78.300	7216.33	73.27 N	526.84 E	531.44
1.59						
7736.00	88.100	78.700	7217.33	79.65 N	558.19 E	563.25
1.40						
7767.00	88.200	78.600	7218.33	85.75 N	588.56 E	594.07
0.46						
7799.00	88.800	78.700	7219.17	92.04 N	619.93 E	625.89
1.90						
7831.00	90.200	79.200	7219.45	98.17 N	651.33 E	657.74
4.65						
7863.00	91.300	79.500	7219.03	104.09 N	682.78 E	689.60
3.56						
7895.00	91.000	79.500	7218.39	109.92 N	714.23 E	721.47
0.94						
7926.00	90.900	79.600	7217.87	115.54 N	744.72 E	752.35
0.46						
7958.00	92.200	80.400	7217.01	121.09 N	776.22 E	784.24
4.77						
7990.00	92.600	81.000	7215.67	126.26 N	807.77 E	816.14
2.25						
8022.00	92.000	81.500	7214.38	131.12 N	839.37 E	848.07
2.44						
8053.00	92.500	81.600	7213.17	135.68 N	870.01 E	879.00
1.64						

8085.00	92.600	82.300	7211.74	140.15 N	901.66 E	910.94
2.21						
8117.00	91.200	83.000	7210.68	144.24 N	933.38 E	942.90
4.89						
8149.00	91.000	82.800	7210.07	148.20 N	965.13 E	974.88
0.88						
8181.00	90.900	82.700	7209.54	152.24 N	996.87 E	1006.86
0.44						
8212.00	90.900	82.900	7209.05	156.12 N	1027.62 E	1037.85
0.65						
8244.00	90.800	82.900	7208.58	160.08 N	1059.37 E	1069.83
0.31						
8276.00	90.600	83.100	7208.18	163.98 N	1091.13 E	1101.82
0.88						
8308.00	92.000	84.100	7207.46	167.54 N	1122.92 E	1133.80
5.38						
8340.00	92.100	84.600	7206.31	170.69 N	1154.75 E	1165.78
1.59						
8372.00	91.600	84.800	7205.28	173.64 N	1186.59 E	1197.77
1.68						
8403.00	91.200	84.500	7204.52	176.53 N	1217.45 E	1228.76
1.61						
8435.00	91.400	84.400	7203.80	179.63 N	1249.29 E	1260.75
0.70						
8467.00	90.400	84.400	7203.29	182.75 N	1281.14 E	1292.74
3.13						
8499.00	89.700	84.200	7203.27	185.93 N	1312.98 E	1324.74
2.28						
8530.00	89.400	84.600	7203.51	188.95 N	1343.83 E	1355.74
1.61						
8562.00	90.500	85.000	7203.54	191.85 N	1375.70 E	1387.74
3.66						
8594.00	89.900	84.800	7203.43	194.70 N	1407.57 E	1419.74
1.98						
8626.00	89.200	84.900	7203.68	197.57 N	1439.44 E	1451.74
2.21						
8658.00	91.000	85.700	7203.62	200.19 N	1471.33 E	1483.73
6.16						
8689.00	90.100	85.200	7203.32	202.65 N	1502.23 E	1514.73
3.32						
8721.00	89.700	86.000	7203.38	205.11 N	1534.13 E	1546.72
2.80						
8753.00	91.200	85.600	7203.13	207.45 N	1566.05 E	1578.71
4.85						
8785.00	90.800	87.500	7202.57	209.38 N	1597.98 E	1610.68
6.07						
8817.00	92.200	89.200	7201.73	210.30 N	1629.96 E	1642.60
6.88						
8848.00	92.700	89.300	7200.41	210.70 N	1660.93 E	1673.46
1.64						
8880.00	92.600	89.300	7198.93	211.09 N	1692.89 E	1705.32
0.31						
8912.00	92.700	89.600	7197.45	211.40 N	1724.85 E	1737.17
0.99						
8945.00	92.200	89.000	7196.04	211.80 N	1757.82 E	1770.02
2.37						
8975.00	92.000	88.500	7194.94	212.46 N	1787.79 E	1799.92
1.79						
9007.00	91.100	88.400	7194.07	213.32 N	1819.77 E	1831.83
2.83						
9039.00	90.900	88.600	7193.51	214.16 N	1851.75 E	1863.75
0.88						
9071.00	90.900	88.800	7193.01	214.88 N	1883.74 E	1895.66
0.62						

9103.00	92.200	87.600	7192.15	215.89 N	1915.71 E	1927.58
5.53						
9134.00	92.300	87.600	7190.93	217.19 N	1946.66 E	1958.51
0.32						
9166.00	92.900	85.900	7189.48	219.00 N	1978.58 E	1990.45
5.63						
9198.00	92.500	85.700	7187.97	221.34 N	2010.45 E	2022.41
1.40						
9239.00	92.500	85.600	7186.18	224.45 N	2051.30 E	2063.36
0.24						
9261.00	92.700	85.700	7185.18	226.11 N	2073.21 E	2085.33
1.02						
9293.00	92.500	85.800	7183.73	228.48 N	2105.09 E	2117.29
0.70						
9325.00	92.300	86.100	7182.39	230.74 N	2136.98 E	2149.25
1.13						
9357.00	92.100	86.300	7181.16	232.86 N	2168.89 E	2181.22
0.88						
9388.00	91.600	86.400	7180.16	234.83 N	2199.81 E	2212.19
1.64						
9420.00	89.900	86.200	7179.74	236.90 N	2231.74 E	2244.17
5.35						
9452.00	89.900	86.400	7179.80	238.96 N	2263.67 E	2276.15
0.63						
9484.00	90.000	85.700	7179.83	241.17 N	2295.60 E	2308.14
2.21						
9516.00	89.800	86.700	7179.88	243.29 N	2327.52 E	2340.12
3.19						
9547.00	89.500	87.100	7180.07	244.96 N	2358.48 E	2371.10
1.61						
9579.00	89.000	86.700	7180.49	246.69 N	2390.43 E	2403.07
2.00						
9608.00	88.900	87.000	7181.02	248.29 N	2419.38 E	2432.04
1.09						
9643.00	88.300	86.800	7181.88	250.18 N	2454.32 E	2467.00
1.81						
9675.00	87.600	86.500	7183.02	252.05 N	2486.24 E	2498.95
2.38						
9738.00	87.200	86.700	7185.88	255.78 N	2549.07 E	2561.85
0.71						
9770.00	86.800	86.700	7187.56	257.62 N	2580.97 E	2593.78
1.25						
9801.00	86.600	86.300	7189.34	259.51 N	2611.86 E	2624.71
1.44						
9832.00	86.200	86.400	7191.29	261.48 N	2642.74 E	2655.63
1.33						
9863.00	86.000	85.000	7193.40	263.80 N	2673.58 E	2686.55
4.55						
9894.00	85.600	86.000	7195.67	266.22 N	2704.40 E	2717.46
3.47						
9929.00	85.300	86.000	7198.44	268.66 N	2739.20 E	2752.34
0.86						
9960.00	85.200	85.800	7201.01	270.87 N	2770.02 E	2783.23
0.72						
10024.00	86.900	83.600	7205.42	276.76 N	2833.59 E	2847.07
4.34						
10056.00	86.600	83.600	7207.23	280.33 N	2865.34 E	2879.01
0.94						
10087.00	86.400	83.800	7209.13	283.72 N	2896.09 E	2909.95
0.91						
10119.00	87.000	83.100	7210.97	287.37 N	2927.83 E	2941.89
2.88						
10151.00	88.900	83.400	7212.11	291.12 N	2959.58 E	2973.86
6.01						

10183.00 0.00	88.900	83.400	7212.73	294.80 N	2991.37 E	3005.85
10215.00 0.44	88.800	83.300	7213.37	298.51 N	3023.15 E	3037.84
10246.00 0.72	88.600	83.200	7214.07	302.15 N	3053.92 E	3068.82
10278.00 0.99	88.300	83.100	7214.94	305.96 N	3085.68 E	3100.80
10310.00 1.29	87.900	83.200	7216.00	309.78 N	3117.44 E	3132.77
10342.00 1.29	88.000	83.600	7217.14	313.45 N	3149.20 E	3164.75
10373.00 0.72	87.900	83.800	7218.25	316.85 N	3180.00 E	3195.72
10405.00 1.25	87.900	83.400	7219.42	320.42 N	3211.78 E	3227.70
10437.00 1.29	87.500	83.500	7220.71	324.07 N	3243.54 E	3259.67
10469.00 1.68	87.000	83.700	7222.24	327.63 N	3275.31 E	3291.63
10500.00 0.97	87.000	83.400	7223.87	331.11 N	3306.07 E	3322.58
10537.00 1.11	86.900	83.800	7225.84	335.22 N	3342.78 E	3359.52
10564.00 1.05	86.700	83.600	7227.34	338.18 N	3369.58 E	3386.48
10596.00 0.63	86.500	83.600	7229.24	341.74 N	3401.32 E	3418.42
10603.00 2.02	86.400	83.500	7229.67	342.53 N	3408.27 E	3425.40
10640.00 0.27	86.500	83.500	7231.96	346.71 N	3444.96 E	3462.33

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.

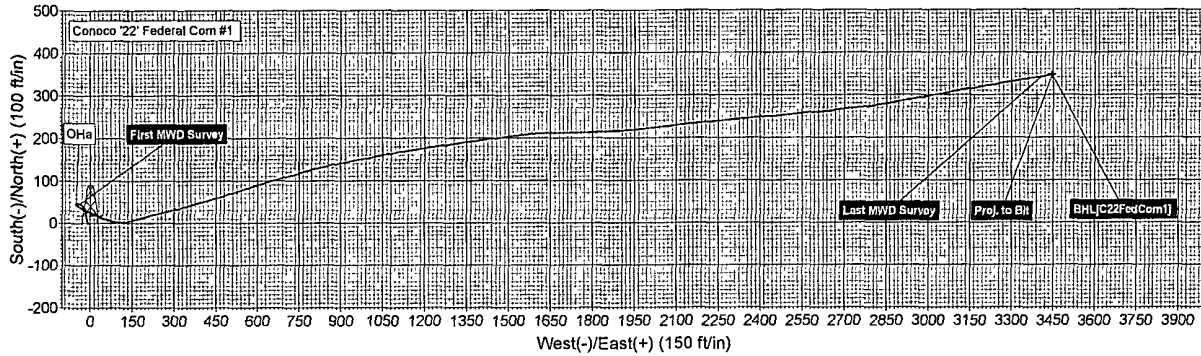
The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Site and calculated along an Azimuth of 84.510° (Grid).

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 0.145°.

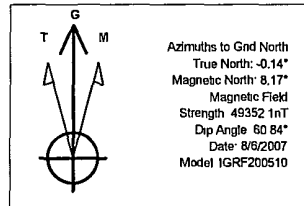
Based upon Minimum Curvature type calculations, at a Measured Depth of 10640.00ft., the Bottom Hole Displacement is 3462.36ft., in the Direction of 84.510° (Grid).



Project: Eddy Co., New Mexico
 Site: Conoco 22' Federal Com #1
 Well: Conoco 22' Federal Com #1
 Wellbore: Lateral #1
 Survey: MWD Survey #1 (Conoco 22' Federal Com #1/Lateral #1)

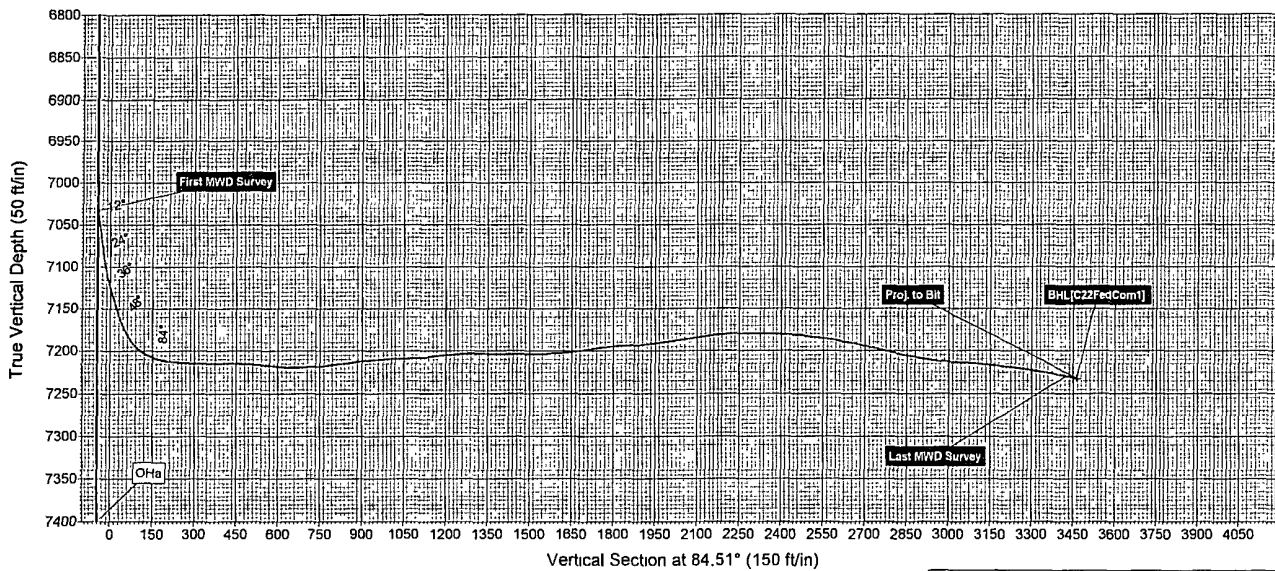


PROJECT DETAILS Eddy Co., New Mexico
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level



ANNOTATIONS

TVD	MD	Annotation
7032.94	7034.00	First MWD Survey
7229.67	10603.00	Last MWD Survey
7231.96	10640.00	Proj. to Bit



Survey: MWD Survey #1 (Conoco 22' Federal Com #1/Lateral #1)
 Created By: L.D. Burton Date: January 7, 2008

WINDOW @ 6984' FT

Top of RSB Packer 6875'

DOWNHOLE WELL PROFILE

WELL NAME	Conoco 22 Fed Com 1	DATE	1/13/08
SUPERVISOR	David Hines/Robert Soliz	TOOL HAND	James Daugherty
PHONE #		PHONE #	432-664-6392
RIG #	Patterson 74	FIELD TICKET #	6925

ELEVATIONS

KB ELEV	GL ELEV	KB TO THF	KB TO SCF	RIG KBD	PBTD
CASING / OPEN HOLE LAYOUT		OD (IN)	LANDED DEPTH	WEIGHT (LB/FT)	TOP OF (ETKB)
CASING DESCRIPTION		5.5		17 #	
WINDOW DESCRIPTION					
OPEN HOLE DESCRIPTION		4.75		JUNCTION @	6984'

DESCRIPTION

Window 6984 - 6996'

STEERING DIRECTIONS

DOWNHOLE DESCRIPTION FROM BOTTOM UP (Tubing String)

BOTTOM @	DESCRIPTION	LENGTH	ID	OD
10359.00'	Pumpout Plug	0.67	0.75	3.69
10358.33	7 Jts 2 7/8" 6.5# P-110 EUE 8 Rd Liner	228.91	2.44	2.88
10129.42'	4 3/8" Open Hole Anchor 1	4.73	2.38	4.63
10124.69	2 Jts 2 7/8" 6.5# P-110 EUE 8 Rd Liner	65.47	2.44	2.88
10059.22'	4 1/2 x 2 7/8 ISO PAK 1	5.01	2.44	4.63
10054.21	8 Jts 2 7/8 6.5 # P-110 EUE 8 Rd Liner	259.77	2.44	2.88
9794.44'	2 7/8 8 Rd Strataport 1.25" ID	2.19	1.31	4.00
9792.25	9 Jts 2 7/8 6.5 # P-110 EUE 8 Rd Liner	294.49	2.44	2.88
9497.76'	4 1/2 x 2 7/8 ISO PAK 2	5.02	2.38	4.63
9492.74	6 Jts 2 7/8 6.5 # P-110 EUE 8 Rd Liner	196.29	2.44	2.88
9296.45'	2 7/8 8 Rd Strata Port 1.50" ID	2.20	1.56	4.00
9294.25	5 Jts 2 7/8 6.5 # P-110 Liner	161.82	2.44	2.88
9132.43'	4 1/2 x 2 7/8 ISO PAK 3	5.02	2.44	4.63
9127.41	11 Jts 2 7/8" 6.5# P-110 EUE 8 Rd Liner	357.06	2.44	2.88
8770.35'	2 7/8 EUE Pn x 3 1/2 UFJ Bx Strataport 1.75	2.31	1.81	4.00
8768.04	12 Jts 3 1/2 9.3 # P-110 UFJ Liner	384.51	2.99	3.50
8383.53'	4 1/2 x 3 1/2 ISO PAK 4	4.88	2.44	4.63
8378.65	18 Jts 3 1/2 UFJ P-110 9.3 # Tubing	569.24	2.99	3.50
7809.41'	3 1/2 UFJ Strata Port 2.0"	2.26	2.06	4.00
7807.15	13 Jts 3 1/2 9.3 # P-110 UFJ Tubing	411.99	2.99	3.50
7395.16'	4 3/8 Open Hole Anchor 2	4.69	2.44	4.63
7390.47	16 Jts 3 1/2 9.3 # P-110 UFJ Tubing	506.06	2.99	3.50
6884.41'	3 1/2 UFJ Pin x 2 7/8 8 RD Pin	0.67	2.44	3.50
6883.74	5 1/2 17# x 3" RSB Packer	4.02	3.00	4.63
6879.72'	Extended Seal Bore 4 1/2" x 4"	4.31	4.00	4.50
6875.41	Hydraulic Setting Tool	5.62	2.34	4.50
6869.79	217 Jts 2 7/8" AOH Drill Pipe	6891.35	2.15	2.88
-21.56	Stick Up	0.00	0.00	0.00
WEIGHT OF STRING				10380.56
PUSH/PULL TEST		25K		-21.56
LINER STRING WEIGHT				10359.00
TOTAL STRING LENGTH				
STICK UP OFF RIG FLOOR				
TUBING BOTTOM				

Anchor #2 7393'

2.0" Strata Port 7808'

ISO PAK #4 8381'

1.75" Strata Port 8769'

ISO PAK #3 9130'

1.50" Strata Port 9295'

ISO PAK #2 9495'

1.25" Strata Port 9793'

ISO PAK #1 10057'

Anchor #1 10127'

Pumpout Plug 10359'

TOTAL MEASURED DEPTH
@ 10640 FT

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