

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Road, Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101

May 27, 2004

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Cimarex Energy Co. PO Box 140907 Irving, TX 75014-0907		GRID Number 215099
Property Code 34887		API Number 30-025-37304
Property Name Caudill South 21 Fee		Well No. 0011
Proposed Pool 1 Caudill; Permo, Upper Penn		Proposed Pool 2

7 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	21	15S	36E		1830	North	1830	West	Lea

8 Proposed 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
G	21	15S	36E		1980	North	1964	East	Lea

Additional Well Information

11 Work Type Code P-Horizontal	12 Well Type Code G	13 Cable/Rotary R	14 Lease Type Code P	15 Ground Level Elevation 3900' GR
16 Multiple No	17 Proposed Depth 14343' MD 10612' TVD	18 Formation Wolfcamp	19 Contractor	20 Spud Date When Approved
Depth to Groundwater 75'		Distance from nearest fresh water well > 1000'		Distance from nearest surface water > 1000'
Pit: ☐ Liner: Synthetic ☐ _____ mils thick Clay ☐ Pit Volume: _____ bbls Drilling Method: _____ ☒ Closed-Loop System ☐ Fresh Water ☐ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐				

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8"	48#	607'	600	0
12-1/4"	9-5/8"	40#	4768'	2010	0
8-3/4"	5-1/2"	17#	10523'	675	8308'

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

The Caudill South 21 Fee No. 1 well is currently producing from the Morrow 10600'-10620.' Cimarex proposes to re-enter, set a CIBP @ 10580' w/ 35' cement, mill out a window at 10421' and sidetrack the well to a MD of 12023' and a TVD of 10612.' Wolfcamp formation will be stimulated as necessary.

Please see attached C-102 and preliminary directional survey.

Permit Expires 1 Year From Approval
Date Unless Drilling Underway
Horizontal

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐ , a general permit ☐ , or an (attached) alternative OCD-approved plan ☐ .		OIL CONSERVATION DIVISION	
Printed name: Zeno Farris <i>Zeno Farris</i>		Approved by: <i>Chris Williams</i>	
Title: Manager Operations Administration		Title: OC DISTRICT SUPERVISOR/GENERAL MANAGER	
E-mail Address: <u>zfarris@cimarex.com</u>		Approval Date: MAR 26 2007 Expiration Date:	
Date: March 23, 2007	Phone: 972-443-6489	Conditions of Approval Attached ☐	

DISTRICT I

1520 S. FRANCIS DR., SANTA FE, NM 87505

DISTRICT II

1501 V. GRASS AVENUE, ALBUQUERQUE, NM 87102

DISTRICT III

1600 Elie Brasse Rd., Aztec, NM 87410

DISTRICT IV

1520 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 JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

MAR 2007
Received
Hobbs
OCD

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30.025-37304	Pool Code 10830	Pool Name Caudill; Permo, Upper Penn
Property Code 34887	Property Name CAUDILL SOUTH 21' FEE	Well Number 1H
OGED No. 215099	Operator Name CIMAREX ENERGY COMPANY	Elevation 3900'

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	21	15-S	36-E		1830	NORTH	1830	WEST	LEA

Bottom Hole Location If Different From Surface

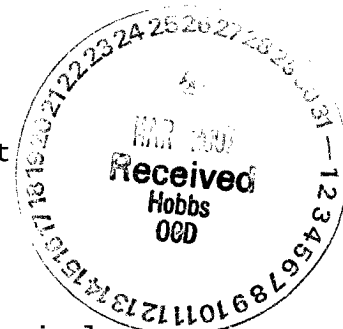
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	21	15-S	36-E		1980	NORTH	1964	EAST	LEA
Dedicated Acres 80	Joint or Infill N	Consolidation Code	Order No.						

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

						OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature Zeno Farris Printed Name Mgr Operations Admin Title 03-23-07 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. MAY 23, 2005 Date Surveyed Signature Professional Surveyor Certified No. GARY BENSON 12841							

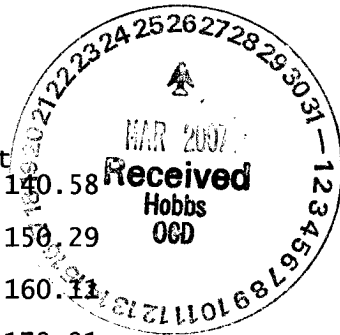
Caudill South 21 Fee #1H Lateral Plan #1 Report 3-21-07.txt
 Cimarex Energy Co., Inc.
 Caudill South 21 Fee #1H - Plan #1

Lea County (NAD 27)
 Caudill South 21 Fee #1H

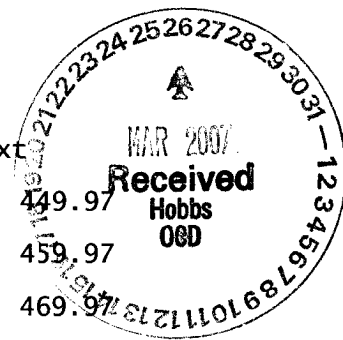


Measured Dogleg Depth Rate (ft) (°/100ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)
10421.01	0.000	0.000	10421.01	0.00 N	0.00 E	0.00
0.00						
10430.00	2.696	95.766	10430.00	0.02 S	0.21 E	0.21
30.00						
10440.00	5.696	95.766	10439.97	0.09 S	0.94 E	0.94
30.00						
10450.00	8.696	95.766	10449.89	0.22 S	2.18 E	2.20
30.00						
10460.00	11.696	95.766	10459.73	0.40 S	3.95 E	3.97
30.00						
10470.00	14.696	95.766	10469.46	0.63 S	6.22 E	6.25
30.00						
10480.00	17.696	95.766	10479.07	0.91 S	8.99 E	9.04
30.00						
10490.00	20.696	95.766	10488.51	1.24 S	12.26 E	12.32
30.00						
10500.00	23.696	95.766	10497.77	1.62 S	16.02 E	16.10
30.00						
10510.00	26.696	95.766	10506.82	2.05 S	20.26 E	20.36
30.00						
10520.00	29.696	95.766	10515.63	2.52 S	24.96 E	25.08
30.00						
10530.00	32.696	95.766	10524.18	3.04 S	30.11 E	30.26
30.00						
10540.00	35.696	95.766	10532.45	3.60 S	35.70 E	35.88
30.00						
10550.00	38.696	95.766	10540.42	4.21 S	41.71 E	41.93
30.00						
10560.00	41.696	95.766	10548.05	4.86 S	48.13 E	48.38
30.00						
10570.00	44.696	95.766	10555.34	5.55 S	54.94 E	55.22
30.00						
10580.00	47.696	95.766	10562.26	6.27 S	62.12 E	62.44
30.00						
10590.00	50.696	95.766	10568.80	7.03 S	69.65 E	70.01
30.00						
10600.00	53.696	95.766	10574.93	7.83 S	77.51 E	77.91
30.00						
10610.00	56.696	95.766	10580.63	8.65 S	85.68 E	86.12
30.00						
10620.00	59.696	95.766	10585.90	9.51 S	94.14 E	94.62
30.00						
10630.00	62.696	95.766	10590.72	10.39 S	102.86 E	103.38
30.00						
10640.00	65.696	95.766	10595.07	11.29 S	111.81 E	112.38
30.00						
10650.00	68.696	95.766	10598.95	12.22 S	120.98 E	121.60
30.00						
10660.00	71.696	95.766	10602.34	13.16 S	130.34 E	131.00
30.00						

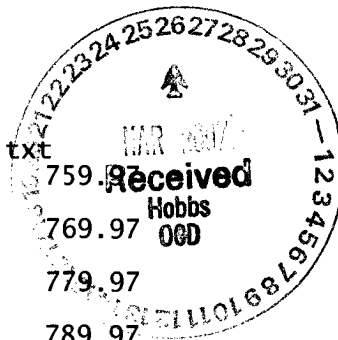
	Caudill	South 21	Fee #1H	Lateral	Plan #1	Report 3-21-07.txt	
10670.00	74.696	95.766	10605.23	14.12 S	139.87 E	140.58	
30.00							
10680.00	77.696	95.766	10607.61	15.10 S	149.53 E	150.29	
30.00							
10690.00	80.696	95.766	10609.49	16.08 S	159.30 E	160.11	
30.00							
10700.00	83.696	95.766	10610.85	17.08 S	169.15 E	170.01	
30.00							
10710.00	86.696	95.766	10611.68	18.08 S	179.07 E	179.98	
30.00							
10720.00	89.696	95.766	10612.00	19.08 S	189.01 E	189.97	
30.00							
10721.01	90.000	95.766	10612.00	19.19 S	190.02 E	190.99	
30.00							
10730.00	90.000	95.766	10612.00	20.09 S	198.96 E	199.97	
0.00							
10740.00	90.000	95.766	10612.00	21.09 S	208.91 E	209.97	
0.00							
10750.00	90.000	95.766	10612.00	22.10 S	218.86 E	219.97	
0.00							
10760.00	90.000	95.766	10612.00	23.10 S	228.81 E	229.97	
0.00							
10770.00	90.000	95.766	10612.00	24.11 S	238.76 E	239.97	
0.00							
10780.00	90.000	95.766	10612.00	25.11 S	248.71 E	249.97	
0.00							
10790.00	90.000	95.766	10612.00	26.12 S	258.66 E	259.97	
0.00							
10800.00	90.000	95.766	10612.00	27.12 S	268.61 E	269.97	
0.00							
10810.00	90.000	95.766	10612.00	28.13 S	278.56 E	279.97	
0.00							
10820.00	90.000	95.766	10612.00	29.13 S	288.51 E	289.97	
0.00							
10830.00	90.000	95.766	10612.00	30.13 S	298.45 E	299.97	
0.00							
10840.00	90.000	95.766	10612.00	31.14 S	308.40 E	309.97	
0.00							
10850.00	90.000	95.766	10612.00	32.14 S	318.35 E	319.97	
0.00							
10860.00	90.000	95.766	10612.00	33.15 S	328.30 E	329.97	
0.00							
10870.00	90.000	95.766	10612.00	34.15 S	338.25 E	339.97	
0.00							
10880.00	90.000	95.766	10612.00	35.16 S	348.20 E	349.97	
0.00							
10890.00	90.000	95.766	10612.00	36.16 S	358.15 E	359.97	
0.00							
10900.00	90.000	95.766	10612.00	37.17 S	368.10 E	369.97	
0.00							
10910.00	90.000	95.766	10612.00	38.17 S	378.05 E	379.97	
0.00							
10920.00	90.000	95.766	10612.00	39.18 S	388.00 E	389.97	
0.00							
10930.00	90.000	95.766	10612.00	40.18 S	397.95 E	399.97	
0.00							
10940.00	90.000	95.766	10612.00	41.19 S	407.90 E	409.97	
0.00							
10950.00	90.000	95.766	10612.00	42.19 S	417.85 E	419.97	
0.00							
10960.00	90.000	95.766	10612.00	43.19 S	427.80 E	429.97	
0.00							
10970.00	90.000	95.766	10612.00	44.20 S	437.75 E	439.97	



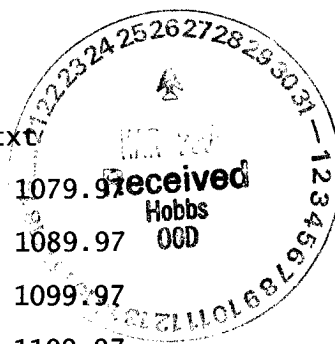
	Caudill	South 21	Fee #1H	Lateral	Plan #1	Report 3-21-07.txt	
0.00							
10980.00	90.000	95.766	10612.00	45.20 S	447.70 E	449.97	
0.00							
10990.00	90.000	95.766	10612.00	46.21 S	457.65 E	459.97	
0.00							
11000.00	90.000	95.766	10612.00	47.21 S	467.59 E	469.97	
0.00							
11010.00	90.000	95.766	10612.00	48.22 S	477.54 E	479.97	
0.00							
11020.00	90.000	95.766	10612.00	49.22 S	487.49 E	489.97	
0.00							
11030.00	90.000	95.766	10612.00	50.23 S	497.44 E	499.97	
0.00							
11040.00	90.000	95.766	10612.00	51.23 S	507.39 E	509.97	
0.00							
11050.00	90.000	95.766	10612.00	52.24 S	517.34 E	519.97	
0.00							
11060.00	90.000	95.766	10612.00	53.24 S	527.29 E	529.97	
0.00							
11070.00	90.000	95.766	10612.00	54.25 S	537.24 E	539.97	
0.00							
11080.00	90.000	95.766	10612.00	55.25 S	547.19 E	549.97	
0.00							
11090.00	90.000	95.766	10612.00	56.25 S	557.14 E	559.97	
0.00							
11100.00	90.000	95.766	10612.00	57.26 S	567.09 E	569.97	
0.00							
11110.00	90.000	95.766	10612.00	58.26 S	577.04 E	579.97	
0.00							
11120.00	90.000	95.766	10612.00	59.27 S	586.99 E	589.97	
0.00							
11130.00	90.000	95.766	10612.00	60.27 S	596.94 E	599.97	
0.00							
11140.00	90.000	95.766	10612.00	61.28 S	606.89 E	609.97	
0.00							
11150.00	90.000	95.766	10612.00	62.28 S	616.84 E	619.97	
0.00							
11160.00	90.000	95.766	10612.00	63.29 S	626.79 E	629.97	
0.00							
11170.00	90.000	95.766	10612.00	64.29 S	636.73 E	639.97	
0.00							
11180.00	90.000	95.766	10612.00	65.30 S	646.68 E	649.97	
0.00							
11190.00	90.000	95.766	10612.00	66.30 S	656.63 E	659.97	
0.00							
11200.00	90.000	95.766	10612.00	67.30 S	666.58 E	669.97	
0.00							
11210.00	90.000	95.766	10612.00	68.31 S	676.53 E	679.97	
0.00							
11220.00	90.000	95.766	10612.00	69.31 S	686.48 E	689.97	
0.00							
11230.00	90.000	95.766	10612.00	70.32 S	696.43 E	699.97	
0.00							
11240.00	90.000	95.766	10612.00	71.32 S	706.38 E	709.97	
0.00							
11250.00	90.000	95.766	10612.00	72.33 S	716.33 E	719.97	
0.00							
11260.00	90.000	95.766	10612.00	73.33 S	726.28 E	729.97	
0.00							
11270.00	90.000	95.766	10612.00	74.34 S	736.23 E	739.97	
0.00							
11280.00	90.000	95.766	10612.00	75.34 S	746.18 E	749.97	
0.00							



	Caudill	South 21	Fee #1H	Lateral	Plan #1	Report 3-21-07.txt	
11290.00	90.000	95.766	10612.00	76.35 S	756.13 E	759.97	
0.00							
11300.00	90.000	95.766	10612.00	77.35 S	766.08 E	769.97	
0.00							
11310.00	90.000	95.766	10612.00	78.36 S	776.03 E	779.97	
0.00							
11320.00	90.000	95.766	10612.00	79.36 S	785.98 E	789.97	
0.00							
11330.00	90.000	95.766	10612.00	80.36 S	795.93 E	799.97	
0.00							
11340.00	90.000	95.766	10612.00	81.37 S	805.87 E	809.97	
0.00							
11350.00	90.000	95.766	10612.00	82.37 S	815.82 E	819.97	
0.00							
11360.00	90.000	95.766	10612.00	83.38 S	825.77 E	829.97	
0.00							
11370.00	90.000	95.766	10612.00	84.38 S	835.72 E	839.97	
0.00							
11380.00	90.000	95.766	10612.00	85.39 S	845.67 E	849.97	
0.00							
11390.00	90.000	95.766	10612.00	86.39 S	855.62 E	859.97	
0.00							
11400.00	90.000	95.766	10612.00	87.40 S	865.57 E	869.97	
0.00							
11410.00	90.000	95.766	10612.00	88.40 S	875.52 E	879.97	
0.00							
11420.00	90.000	95.766	10612.00	89.41 S	885.47 E	889.97	
0.00							
11430.00	90.000	95.766	10612.00	90.41 S	895.42 E	899.97	
0.00							
11440.00	90.000	95.766	10612.00	91.42 S	905.37 E	909.97	
0.00							
11450.00	90.000	95.766	10612.00	92.42 S	915.32 E	919.97	
0.00							
11460.00	90.000	95.766	10612.00	93.42 S	925.27 E	929.97	
0.00							
11470.00	90.000	95.766	10612.00	94.43 S	935.22 E	939.97	
0.00							
11480.00	90.000	95.766	10612.00	95.43 S	945.17 E	949.97	
0.00							
11490.00	90.000	95.766	10612.00	96.44 S	955.12 E	959.97	
0.00							
11500.00	90.000	95.766	10612.00	97.44 S	965.07 E	969.97	
0.00							
11510.00	90.000	95.766	10612.00	98.45 S	975.01 E	979.97	
0.00							
11520.00	90.000	95.766	10612.00	99.45 S	984.96 E	989.97	
0.00							
11530.00	90.000	95.766	10612.00	100.46 S	994.91 E	999.97	
0.00							
11540.00	90.000	95.766	10612.00	101.46 S	1004.86 E	1009.97	
0.00							
11550.00	90.000	95.766	10612.00	102.47 S	1014.81 E	1019.97	
0.00							
11560.00	90.000	95.766	10612.00	103.47 S	1024.76 E	1029.97	
0.00							
11570.00	90.000	95.766	10612.00	104.47 S	1034.71 E	1039.97	
0.00							
11580.00	90.000	95.766	10612.00	105.48 S	1044.66 E	1049.97	
0.00							
11590.00	90.000	95.766	10612.00	106.48 S	1054.61 E	1059.97	
0.00							
11600.00	90.000	95.766	10612.00	107.49 S	1064.56 E	1069.97	



	Caudill	South 21	Fee #1H	Lateral	Plan #1	Report 3-21-07.txt	
0.00							
11610.00	90.000	95.766	10612.00	108.49 S	1074.51 E	1079.97	
0.00							
11620.00	90.000	95.766	10612.00	109.50 S	1084.46 E	1089.97	
0.00							
11630.00	90.000	95.766	10612.00	110.50 S	1094.41 E	1099.97	
0.00							
11640.00	90.000	95.766	10612.00	111.51 S	1104.36 E	1109.97	
0.00							
11650.00	90.000	95.766	10612.00	112.51 S	1114.31 E	1119.97	
0.00							
11660.00	90.000	95.766	10612.00	113.52 S	1124.26 E	1129.97	
0.00							
11670.00	90.000	95.766	10612.00	114.52 S	1134.21 E	1139.97	
0.00							
11680.00	90.000	95.766	10612.00	115.53 S	1144.15 E	1149.97	
0.00							
11690.00	90.000	95.766	10612.00	116.53 S	1154.10 E	1159.97	
0.00							
11700.00	90.000	95.766	10612.00	117.53 S	1164.05 E	1169.97	
0.00							
11710.00	90.000	95.766	10612.00	118.54 S	1174.00 E	1179.97	
0.00							
11720.00	90.000	95.766	10612.00	119.54 S	1183.95 E	1189.97	
0.00							
11730.00	90.000	95.766	10612.00	120.55 S	1193.90 E	1199.97	
0.00							
11740.00	90.000	95.766	10612.00	121.55 S	1203.85 E	1209.97	
0.00							
11750.00	90.000	95.766	10612.00	122.56 S	1213.80 E	1219.97	
0.00							
11760.00	90.000	95.766	10612.00	123.56 S	1223.75 E	1229.97	
0.00							
11770.00	90.000	95.766	10612.00	124.57 S	1233.70 E	1239.97	
0.00							
11780.00	90.000	95.766	10612.00	125.57 S	1243.65 E	1249.97	
0.00							
11790.00	90.000	95.766	10612.00	126.58 S	1253.60 E	1259.97	
0.00							
11800.00	90.000	95.766	10612.00	127.58 S	1263.55 E	1269.97	
0.00							
11810.00	90.000	95.766	10612.00	128.58 S	1273.50 E	1279.97	
0.00							
11820.00	90.000	95.766	10612.00	129.59 S	1283.45 E	1289.97	
0.00							
11830.00	90.000	95.766	10612.00	130.59 S	1293.40 E	1299.97	
0.00							
11840.00	90.000	95.766	10612.00	131.60 S	1303.35 E	1309.97	
0.00							
11850.00	90.000	95.766	10612.00	132.60 S	1313.29 E	1319.97	
0.00							
11860.00	90.000	95.766	10612.00	133.61 S	1323.24 E	1329.97	
0.00							
11870.00	90.000	95.766	10612.00	134.61 S	1333.19 E	1339.97	
0.00							
11880.00	90.000	95.766	10612.00	135.62 S	1343.14 E	1349.97	
0.00							
11890.00	90.000	95.766	10612.00	136.62 S	1353.09 E	1359.97	
0.00							
11900.00	90.000	95.766	10612.00	137.63 S	1363.04 E	1369.97	
0.00							
11910.00	90.000	95.766	10612.00	138.63 S	1372.99 E	1379.97	
0.00							



	Caudill	South 21	Fee #1H	Lateral	Plan #1	Report 3-21-07.txt	
11920.00	90.000	95.766	10612.00	139.64 S	1382.94 E	1389.97	
0.00							
11930.00	90.000	95.766	10612.00	140.64 S	1392.89 E	1399.97	
0.00							
11940.00	90.000	95.766	10612.00	141.64 S	1402.84 E	1409.97	
0.00							
11950.00	90.000	95.766	10612.00	142.65 S	1412.79 E	1419.97	
0.00							
11960.00	90.000	95.766	10612.00	143.65 S	1422.74 E	1429.97	
0.00							
11970.00	90.000	95.766	10612.00	144.66 S	1432.69 E	1439.97	
0.00							
11980.00	90.000	95.766	10612.00	145.66 S	1442.64 E	1449.97	
0.00							
11990.00	90.000	95.766	10612.00	146.67 S	1452.59 E	1459.97	
0.00							
12000.00	90.000	95.766	10612.00	147.67 S	1462.54 E	1469.97	
0.00							
12010.00	90.000	95.766	10612.00	148.68 S	1472.49 E	1479.97	
0.00							
12020.00	90.000	95.766	10612.00	149.68 S	1482.43 E	1489.97	
0.00							
12023.17	90.000	95.766	10612.00	150.00 S	1485.59 E	1493.14	
0.00							

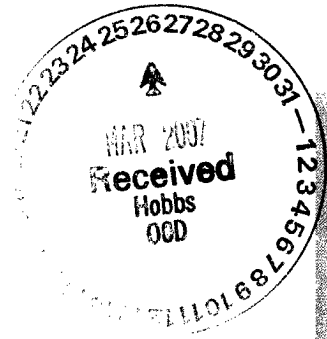
All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to WELL. Northings and Eastings are relative to well.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from slot and calculated along an Azimuth of 95.766° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), New Mexico East 3001.
Central meridian is -104.333°.
Grid Convergence at Surface is 0.557°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 12023.17ft., the Bottom Hole Displacement is 1493.14ft., in the Direction of 95.766° (Grid).





Cimarex Energy Co., Inc.

Lea County (NAD 27)

Caudill South 21 Fee #1H

Caudill South 21 Fee #1H

Lateral #1

Plan: Plan #1

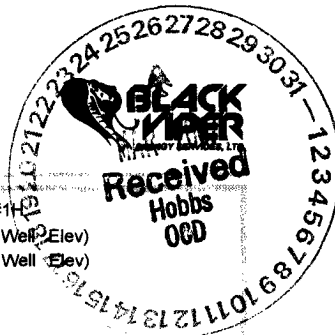
Standard Survey Report

23 March, 2007





Black Viper Energy Survey Report



Company: Cimarex Energy Co., Inc.
Project: Lea County (NAD 27)
Site: Caudill South 21 Fee #1H
Well: Caudill South 21 Fee #1H
Wellbore: Lateral #1
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Caudill South 21 Fee #1H
WELL @ 3900.00ft (Original Well Elev)
WELL @ 3900.00ft (Original Well Elev)
Grid
Minimum Curvature
EDM 2003.14.1.0 Server DB

Project: Lea County (NAD 27)

Map System: US State Plane 1927 (Exact solution) System Datum: Ground Level
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

Site: Caudill South 21 Fee #1H

Site Position: Northing: 730,897.00 ft Latitude: 33° 0' 18.406 N
From: Map Easting: 813,361.00 ft Longitude: 103° 18' 40.301 W
Position Uncertainty: 0.00 ft Slot Radius: " Grid Convergence: 0.56 °

Well: Caudill South 21 Fee #1H

Well Position: +N-S 0.00 ft Northing: 730,897.00 ft Latitude: 33° 0' 18.406 N
+E-W 0.00 ft Easting: 813,361.00 ft Longitude: 103° 18' 40.301 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	3/21/2007	8.02	61.07	49,590

Design: Plan #1

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 10,421.00

Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)	Direction (°)
	0.00	0.00	0.00	95.77

Survey Tool Program Date: 3/23/2007

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
10,421.00	12,023.17	Plan #1 (Lateral #1)	MWD2	MWD - Standard

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,421.01	0.00	0.00	10,421.01	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Build 30.0° / 100									
10,430.00	2.70	95.77	10,430.00	-0.02	0.21	0.21	30.00	30.00	0.00
10,440.00	5.70	95.77	10,439.97	-0.09	0.94	0.94	30.00	30.00	0.00
10,450.00	8.70	95.77	10,449.89	-0.22	2.18	2.20	30.00	30.00	0.00
10,460.00	11.70	95.77	10,459.73	-0.40	3.95	3.97	30.00	30.00	0.00
10,470.00	14.70	95.77	10,469.46	-0.63	6.22	6.25	30.00	30.00	0.00
10,480.00	17.70	95.77	10,479.07	-0.91	8.99	9.04	30.00	30.00	0.00
10,490.00	20.70	95.77	10,488.51	-1.24	12.26	12.32	30.00	30.00	0.00
10,500.00	23.70	95.77	10,497.77	-1.62	16.02	16.10	30.00	30.00	0.00
10,510.00	26.70	95.77	10,506.82	-2.05	20.26	20.36	30.00	30.00	0.00
10,520.00	29.70	95.77	10,515.63	-2.52	24.96	25.08	30.00	30.00	0.00
10,530.00	32.70	95.77	10,524.18	-3.04	30.11	30.26	30.00	30.00	0.00



```
Well Caudill South 21 Fee #1H
WELL @ 3900.00ft (Original Well Elev)
WELL @ 3900.00ft (Original Well Elev)
Grid
Minimum Curvature
EDM 2003.14.1.0 Server DB
```

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Bulld Rate (°/100ft)	Turn Rate (°/100ft)
10,540.00	35.70	95.77	10,532.45	-3.60	35.70	35.88	30.00	30.00	0.00
10,550.00	38.70	95.77	10,540.42	-4.21	41.71	41.93	30.00	30.00	0.00
10,560.00	41.70	95.77	10,548.05	-4.86	48.13	48.38	30.00	30.00	0.00
10,570.00	44.70	95.77	10,555.34	-5.55	54.94	55.22	30.00	30.00	0.00
10,580.00	47.70	95.77	10,562.26	-6.27	62.12	62.44	30.00	30.00	0.00
10,590.00	50.70	95.77	10,568.80	-7.03	69.65	70.01	30.00	30.00	0.00
10,600.00	53.70	95.77	10,574.93	-7.83	77.51	77.91	30.00	30.00	0.00
10,610.00	56.70	95.77	10,580.63	-8.65	85.68	86.12	30.00	30.00	0.00
10,620.00	59.70	95.77	10,585.90	-9.51	94.14	94.62	30.00	30.00	0.00
10,630.00	62.70	95.77	10,590.72	-10.39	102.86	103.38	30.00	30.00	0.00
10,640.00	65.70	95.77	10,595.07	-11.29	111.81	112.38	30.00	30.00	0.00
10,650.00	68.70	95.77	10,598.95	-12.22	120.98	121.60	30.00	30.00	0.00
10,652.33	69.40	95.77	10,599.78	-12.43	123.15	123.78	30.00	30.00	0.00
Top of Wolfcamp Pay									
10,660.00	71.70	95.77	10,602.34	-13.16	130.34	131.00	30.00	30.00	0.00
10,670.00	74.70	95.77	10,605.23	-14.12	139.87	140.58	30.00	30.00	0.00
10,680.00	77.70	95.77	10,607.61	-15.10	149.53	150.29	30.00	30.00	0.00
10,690.00	80.70	95.77	10,609.49	-16.08	159.30	160.11	30.00	30.00	0.00
10,700.00	83.70	95.77	10,610.85	-17.08	169.15	170.01	30.00	30.00	0.00
10,710.00	86.70	95.77	10,611.68	-18.08	179.07	179.98	30.00	30.00	0.00
10,720.00	89.70	95.77	10,612.00	-19.08	189.01	189.97	30.00	30.00	0.00
10,721.01	90.00	95.77	10,612.00	-19.19	190.02	190.99	30.00	30.00	0.00
EOC - Hold 90.0° Inc. :: 95.77° Azi.									
10,800.00	90.00	95.77	10,612.00	-27.12	268.61	269.97	0.00	0.00	0.00
10,900.00	90.00	95.77	10,612.00	-37.17	368.10	369.97	0.00	0.00	0.00
11,000.00	90.00	95.77	10,612.00	-47.21	467.59	469.97	0.00	0.00	0.00
11,100.00	90.00	95.77	10,612.00	-57.26	567.09	569.97	0.00	0.00	0.00
11,200.00	90.00	95.77	10,612.00	-67.30	666.58	669.97	0.00	0.00	0.00
11,300.00	90.00	95.77	10,612.00	-77.35	766.08	769.97	0.00	0.00	0.00
11,400.00	90.00	95.77	10,612.00	-87.40	865.57	869.97	0.00	0.00	0.00
11,500.00	90.00	95.77	10,612.00	-97.44	965.07	969.97	0.00	0.00	0.00
11,600.00	90.00	95.77	10,612.00	-107.49	1,064.56	1,069.97	0.00	0.00	0.00
11,700.00	90.00	95.77	10,612.00	-117.53	1,164.05	1,169.97	0.00	0.00	0.00
11,800.00	90.00	95.77	10,612.00	-127.58	1,263.55	1,269.97	0.00	0.00	0.00
11,900.00	90.00	95.77	10,612.00	-137.63	1,363.04	1,369.97	0.00	0.00	





Black Viper Energy Survey Report



Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Caudill South 21 Fee #1H
Project:	Lea County (NAD 27)	TVD Reference:	WELL @ 3900.00ft (Original Well Elev)
Site:	Caudill South 21 Fee #1H	ND Reference:	WELL @ 3900.00ft (Original Well Elev)
Well:	Caudill South 21 Fee #1H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003.14.1.0 Server DB

Targets

Target Name	Interval	Target Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Shape	(°)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL#1[CS21Fee #21]		0.00	0.00	10,612.00	-150.00	1,485.59	730,747.00	814,846.59	33° 0' 16.779 N	103° 18' 22.875 W
- Interval target										
- plan target										
- Point										

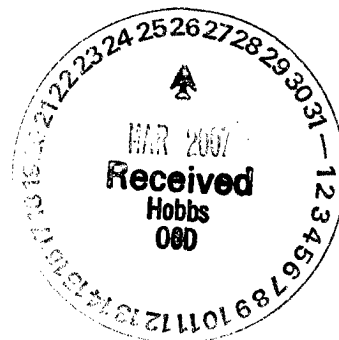
Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
10,652.33	10,600.00	Top of Wolfcamp Pay		1.00	0.00
	10,619.00	Base of Wolfcamp Pay		1.00	0.00

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
10,421.01	10,421.01	0.00	0.00	KOP - Build 30.0° / 100
10,721.01	10,612.00	-19.19	190.02	EOC - Hold 90.0° Inc. :: 95.77° Azi.

Checked By: _____ Approved By: _____ Date: _____



District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88213
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-144
June 1, 2004

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

Pit or Below-Grade Tank Registration or Closure

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

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

Operator: Cimarex Energy Co. Telephone: 972-401-3111 e-mail address: zfarris@cimarex.com
Address: PO Box 140907, Irving, TX 75014-0907
Facility or well name: Caudill South 21 Fee No. 11 API #: 30-025- 37304 U/L or Qtr/Qtr F Sec 21 T 15S R 36E
County: Lea Latitude 330018.42 N Longitude 1031840.28 W NAD: 1927 ☐ 1983 ☒
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐
Workover ☐ Emergency ☐
Lined ☒ Unlined ☐
Liner type: Synthetic ☒ Thickness 12 mil Clay ☐
Pit Volume _____ bbl closed system, cuttings buried

Below-grade tank

Volume: _____ bbl Type of fluid: _____
Construction material: _____
Double-walled, with leak detection? Yes ☐ If not, explain why not.

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) <u>75'</u>	Less than 50 feet	(20 points)
	<u>50 feet or more, but less than 100 feet</u>	(10 points)
	100 feet or more	(0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes	(20 points)
	<u>No</u>	(0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet	(20 points)
	<u>200 feet or more, but less than 1000 feet</u>	(10 points)
	<u>1000 feet or more</u>	(0 points)
Ranking Score (Total Points)		10

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

Additional Comments:

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

Date: 03.22.07

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

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

Approval:

Printed Name/Title CHRIS WILLIAMS / DIST. SUPV Signature Chris Williams

MAR 26 2007