ATS-08-313
EA-08-562

OCD-ARTESIA

Form 3160-3
(April 2004)

S

APR – 2 2008
OCD-ARTESIA

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
LC-061638

6. If Indian, Allotee or Tribe Name

1a. Type of Work: [X] DRILL [ ] REENTER

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

1b. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone

8. Lease Name and Well No 37110
Dynamite 14 Federal No. 1

2 Name of Operator
Cimarex Energy Co. of Colorado 162683

9 API Well No.
30-015- 36274

3a. Address
PO Box 140907
Irving, TX 75014

3b. Phone No. *(include area code)*
972-401-3111

10. Field and Pool, or Exploratory
Abo Wildcat

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At Surface 1650' FNL & 330' FWL

At proposed prod. Zone 1980' FNL & 330' FEL

11 Sec , T. R. M or Blk. and Survey or Area
14-16S-29E

14. Distance in miles and direction from nearest town or post office*
13 miles ESE of Lake Arthur

12. County or Parish
Eddy

13 State
NM

15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
330'	1040	S2N2 160
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19. Proposed Depth	20. BLM/BIA Bond No on File
N/A	Pilot hole 7650' TD 11796' MD TD 7300' TVD	NM-2575

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3708' GR	4/1/2008	30-35 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form.

1. Well plat certified by a registered surveyor
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator Certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25 Signature	Name *(Printed/Typed)*	Date
Zeno Farris	Zeno Farris	01.29.08

Title
Manager Operations Administration

Approved By *(Signature)* /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Date MAR 31 2008
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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

APPROVAL FOR TWO YEARS

Title 18 U S S 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.

ROSWELL CONTROLLED WATER BASIN

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

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 Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		Abo Wildcat

Property Code	Property Name	Well Number
	DYNAMITE "14" FEDERAL	1H

OGRID No.	Operator Name	Elevation
162683	CIMAREX ENERGY CO. OF COLORADO	3708'

Surface Location

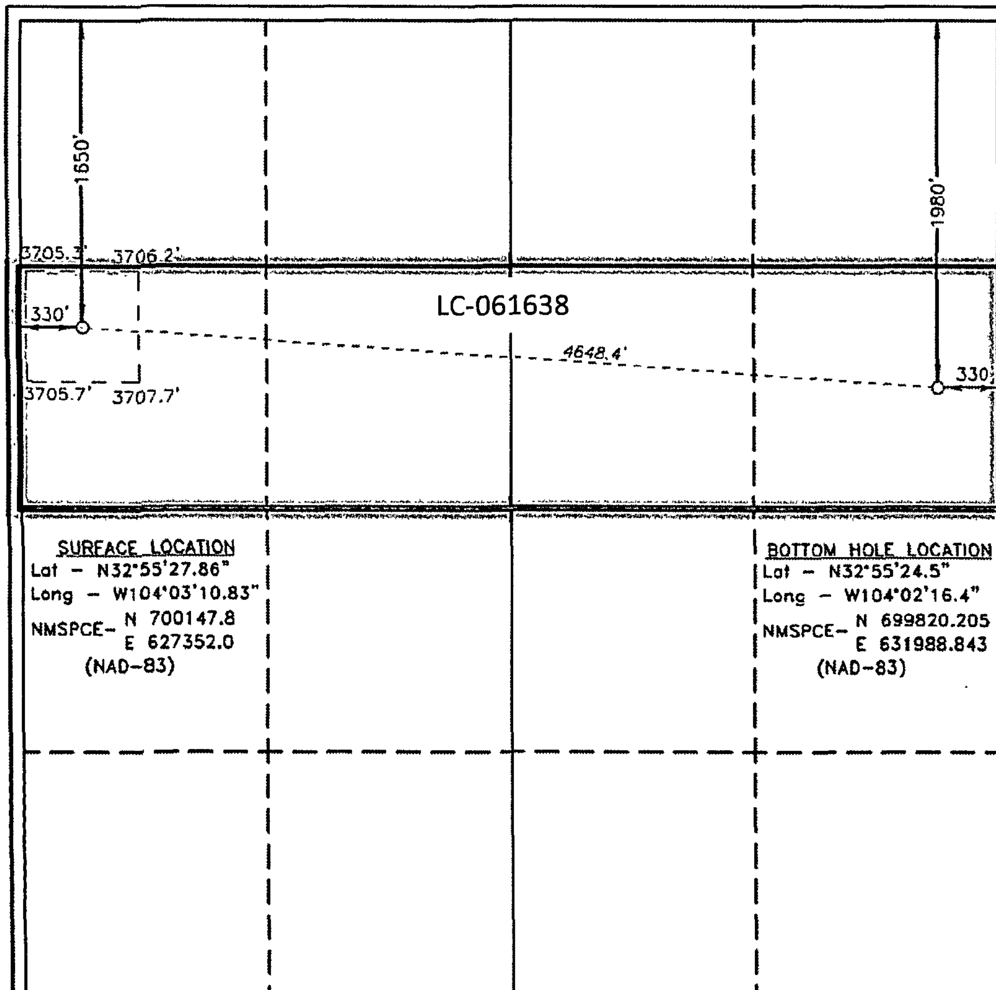
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	14	16 S	29 E		1650	NORTH	330	WEST	EDDY

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	14	16 S	29 E		1980	NORTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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



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.

[signature] 01-29-08
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 supervison, and that the same is true and correct to the best of my belief.

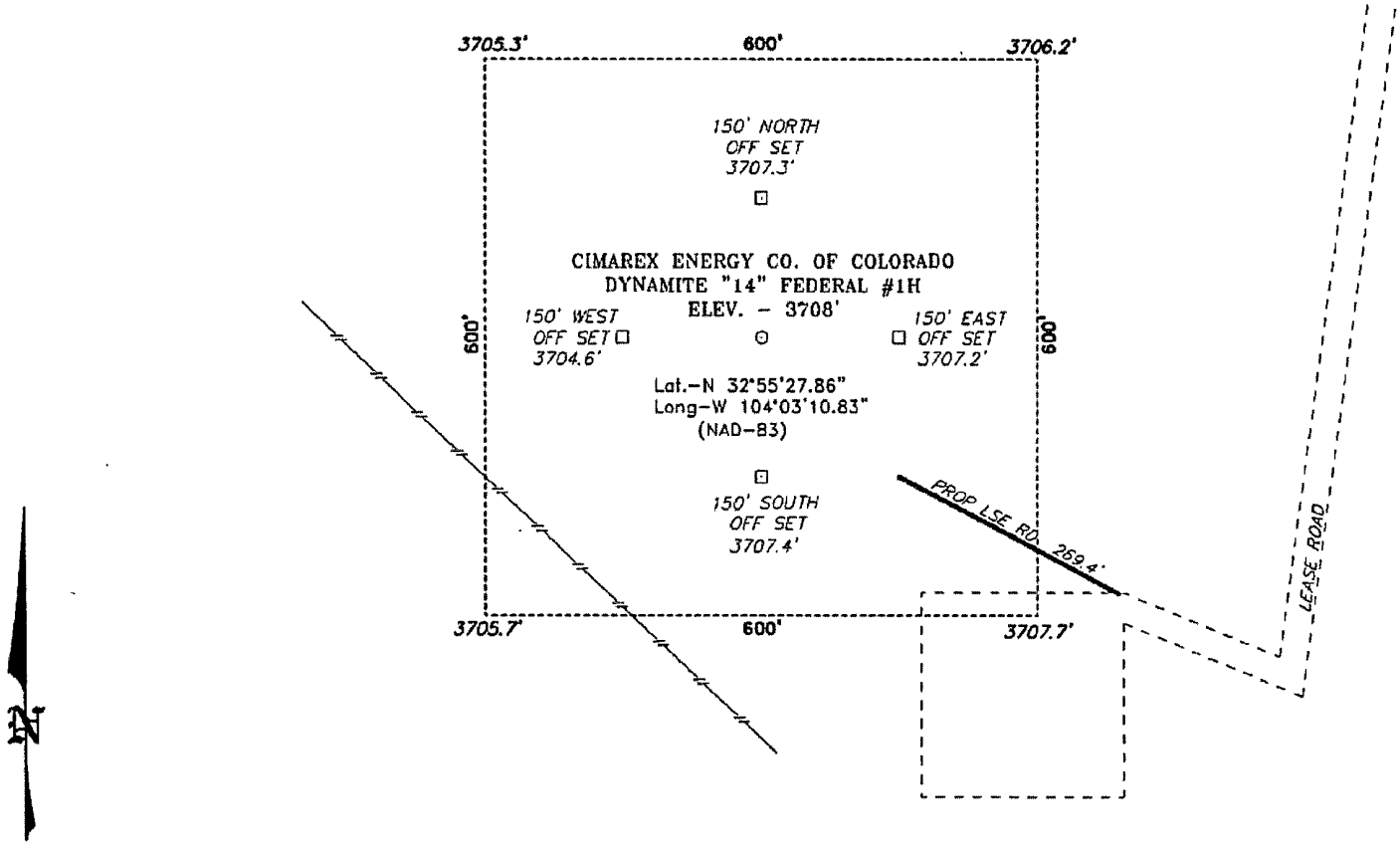
JANUARY 19, 2008
Date Surveyed
Signature & Seal of Professional Surveyor

W.O. No. [illegible]

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 14, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF US HWY 82 AND BARNIVAL DRAW, GO NORTH ON BARNIVAL DRAW FOR 6.8 MILES TO LEASE ROAD, ON LEASE ROAD GO EAST 2.5 MILES TO LEASE ROAD, GO SOUTH FOR 0.2 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST TO PROPOSED LEASE ROAD.

CIMAREX ENERGY CO. OF COLORADO

REF: DYNAMITE "14" FEDERAL #1H / WELL PAD TOPO

THE DYNAMITE "14" FEDERAL #1H LOCATED 1650' FROM THE NORTH LINE AND 330' FROM THE WEST LINE OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 19027	Drawn By: J. SMALL		
Date: 01-22-2008	Disk: JMS 19027W	Survey Date: 01-19-2008	Sheet 1 of 1 Sheets

Application to Drill
Cimarex Energy Co. of Colorado
Dynamite 14 Federal No. 1
Unit E Section 14
T16S R29E Eddy County, NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1 Location: SHL 1650' FNL & 330' FWL
BHL 1980' FNL & 330' FEL

2 Elevation above sea level: 3708' GR

3 Geologic name of surface formation: Quaternery Alluvium Deposits

4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.

5 Proposed drilling depth: Pilot hole 7650' ☒TD 11796' MD ☒TD 7300' TVD

6 Estimated tops of geological markers:

Queen	2,200'
San Andres	2,950'
Abo Shale	6,020'
Lower Abo Dolomite	7,240'
Wolfcamp	7,350'

7 Possible mineral bearing formation:
Abo Oil Primary

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 340'	8.4 - 8.6	28-29	May lose circ	Fresh water gel spud mud
340' to 2650'	10.0	28-29	May lose circ	Brine Water
2650' to 7650'	8.4 - 9.5	29-32	NC	Fresh water and brine, use hi-vis sweeps to keep hole clean
0' to 11796'	8.4 - 9.5	29-33	NC	2% KCL

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

8a. Proposed drilling Plan
Drill pilot hole to 7650' and set and cement 7" casing as shown on page 2. Set kick-off plug at 7060.' Mill window from 7045'-7055.' Kick off horizontal leg at 7050' and drill 6⅛" hole to 11796' MD, 7300' TVD. Lateral length 4632.' Run 4853' 4½" 11.6# P-110 (500' BTC from RSB Pkr @ 6943' to 7443') (LTC from 7444' to 11796') Peak Systems Liner to TD, which will not require cementing.

Application to Drill
Cimarex Energy Co. of Colorado
Dynamite 14 Federal No. 1
Unit E Section 14
T16S R29E Eddy County, NM

9 Casing & Cementing Program:

Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
17½"	0	to	340'	New	13⅜"	48#	8-R	STC	H-40
12¼"	0	to	2650'	New	9⅝"	40#	8-R	LTC	J/K-55
8¾"	0	to	7650'	New	7"	26#	8-R	LTC	P-110
6⅛"	6943'	to	11796'	New	4½"	11.6#	8-R	LTC/BTC	P-110

10 Cementing & Setting Depth:

13⅜" **Surface** Set 340' of 13⅜" 48# H-40 STC
Lead: 300 sx Thixotropic/Premium Plus + 10# Gilsonite + 10# Cal-Seal + 1% CaCl + 0.125# Poly-e-flake (wt 14.2, yld 1.64)
Tail: 220 sx Premium Plus + 2% CaCl (wt 14.8, yld 1.35)
TOC Surface

9⅝" **Intermediate** Set 2650' of 9⅝" 40# J/K-55 LTC
Lead: 425 sx Interfill C + 0.125# flocele (wt 11.9, yld 2.45)
Tail: 200 sx Prem Plus + 1% CaCl (wt 14.8, yld 1.33)
TOC Surface

7" **Production** Set 7650' of 7" 26# P-110 LTC
1550 sx Super H + 0.5% Halad-344 + 0.4% CFR-3 + 1lbm/sk salt + 5 lb/sk Gilsonite + 0.125 lb/sk PolyEflake + 0.35% HR-7 (wt 13.0 ppg, yld 1.67 cf/sk)
TOC 2300'

4½" **Liner** Set 6943'-11796' of 4½" 11.6# P-110 LTC/BTC
Total of 4853' of 4½" liner. TOL 6943' and BOL 11796.' No cement for Iso-Pak liner.

Fresh water will be protected by setting 13⅜" casing at 340' and cementing to Surface
Hydrocarbon zones will be protected by setting 9⅝" casing at 2650' and cementing to Surface
and by setting 7" casing at 7650' and cementing to 2300'

Cimarex uses the following minimum safety factors:

Burst	Collapse	Tension
1.125	1.125	1.80

11 Pressure control Equipment:

Exhibit "E". A 13 3/8" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000 # annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be nippled up casing and will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 psi BOP system.

We are requesting a variance for testing the 13-3/8" surface casing from Onshore Order No. 2, which states that all casing strings below the conductor shall be pressure tested to 0.22 psi per foot or 1500 psi, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. We are requesting to test the 13-3/8" casing to 1000 psi using rig pumps. The BOP will be tested to 5000 PSI by an independent service company.

12 Testing, Logging and Coring Program:

A. Mud logging program: 2 man unit from 2650' to TD
B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potiential H2S hazard. An H2S drilling plan is attached. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP **4000 psi** Estimated BHT **175**

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.
Drilling expected to take 30-35 days
If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.
Abo pay will be perforated and stimulated.
The proposed well will be tested and potentialed as **an oil well.**

Cimarex Energy Co., Inc.
Dynamite 14 Federal #1H - Plan #1

Eddy Co., New Mexico
Dynamite 14 Federal #1H

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7050.00	0.000	0.000	7050.00	0.00 N	0.00 E	0.00	0.00
7080.00	8.594	94.086	7079.89	0.16 S	2.24 E	2.25	28.65
7110.00	17.188	94.086	7109.10	0.64 S	8.91 E	8.93	28.65
7140.00	25.781	94.086	7136.99	1.42 S	19.86 E	19.91	28.65
7170.00	34.375	94.086	7162.93	2.49 S	34.84 E	34.93	28.65
7200.00	42.969	94.086	7186.33	3.82 S	53.52 E	53.66	28.65
7230.00	51.563	94.086	7206.67	5.39 S	75.48 E	75.67	28.65
7260.00	60.157	94.086	7223.49	7.16 S	100.23 E	100.48	28.65
7290.00	68.751	94.086	7236.41	9.09 S	127.20 E	127.52	28.65
7320.00	77.344	94.086	7245.15	11.13 S	155.79 E	156.19	28.65
7350.00	85.938	94.086	7249.51	13.24 S	185.37 E	185.85	28.65
7361.92	89.354	94.086	7250.00	14.09 S	197.25 E	197.76	28.65
7380.00	89.354	94.086	7250.20	15.38 S	215.28 E	215.83	0.00
7410.00	89.354	94.086	7250.54	17.51 S	245.21 E	245.83	0.00
7440.00	89.354	94.086	7250.88	19.65 S	275.13 E	275.83	0.00
7470.00	89.354	94.086	7251.22	21.79 S	305.05 E	305.83	0.00
7500.00	89.354	94.086	7251.56	23.93 S	334.97 E	335.82	0.00
7530.00	89.354	94.086	7251.90	26.06 S	364.89 E	365.82	0.00
7560.00	89.354	94.086	7252.23	28.20 S	394.82 E	395.82	0.00
7590.00	89.354	94.086	7252.57	30.34 S	424.74 E	425.82	0.00
7620.00	89.354	94.086	7252.91	32.48 S	454.66 E	455.82	0.00
7650.00	89.354	94.086	7253.25	34.61 S	484.58 E	485.82	0.00
7680.00	89.354	94.086	7253.59	36.75 S	514.50 E	515.81	0.00
7710.00	89.354	94.086	7253.92	38.89 S	544.42 E	545.81	0.00
7740.00	89.354	94.086	7254.26	41.02 S	574.35 E	575.81	0.00

7770.00	89.354	94.086	7254.60	43.16	S	604.27	E	605.81	0.00
7800.00	89.354	94.086	7254.94	45.30	S	634.19	E	635.81	0.00
7830.00	89.354	94.086	7255.28	47.44	S	664.11	E	665.80	0.00
7860.00	89.354	94.086	7255.62	49.57	S	694.03	E	695.80	0.00
7890.00	89.354	94.086	7255.95	51.71	S	723.96	E	725.80	0.00
7920.00	89.354	94.086	7256.29	53.85	S	753.88	E	755.80	0.00
7950.00	89.354	94.086	7256.63	55.99	S	783.80	E	785.80	0.00
7980.00	89.354	94.086	7256.97	58.12	S	813.72	E	815.79	0.00
8010.00	89.354	94.086	7257.31	60.26	S	843.64	E	845.79	0.00
8040.00	89.354	94.086	7257.65	62.40	S	873.56	E	875.79	0.00
8070.00	89.354	94.086	7257.98	64.53	S	903.49	E	905.79	0.00
8100.00	89.354	94.086	7258.32	66.67	S	933.41	E	935.79	0.00
8130.00	89.354	94.086	7258.66	68.81	S	963.33	E	965.78	0.00
8160.00	89.354	94.086	7259.00	70.95	S	993.25	E	995.78	0.00
8190.00	89.354	94.086	7259.34	73.08	S	1023.17	E	1025.78	0.00
8220.00	89.354	94.086	7259.68	75.22	S	1053.10	E	1055.78	0.00
8250.00	89.354	94.086	7260.01	77.36	S	1083.02	E	1085.78	0.00
8280.00	89.354	94.086	7260.35	79.50	S	1112.94	E	1115.78	0.00
8310.00	89.354	94.086	7260.69	81.63	S	1142.86	E	1145.77	0.00
8340.00	89.354	94.086	7261.03	83.77	S	1172.78	E	1175.77	0.00
8370.00	89.354	94.086	7261.37	85.91	S	1202.71	E	1205.77	0.00
8400.00	89.354	94.086	7261.71	88.04	S	1232.63	E	1235.77	0.00
8430.00	89.354	94.086	7262.04	90.18	S	1262.55	E	1265.77	0.00
8460.00	89.354	94.086	7262.38	92.32	S	1292.47	E	1295.76	0.00
8490.00	89.354	94.086	7262.72	94.46	S	1322.39	E	1325.76	0.00
8520.00	89.354	94.086	7263.06	96.59	S	1352.31	E	1355.76	0.00
8550.00	89.354	94.086	7263.40	98.73	S	1382.24	E	1385.76	0.00
8580.00	89.354	94.086	7263.73	100.87	S	1412.16	E	1415.76	0.00
8610.00	89.354	94.086	7264.07	103.01	S	1442.08	E	1445.75	0.00
8640.00	89.354	94.086	7264.41	105.14	S	1472.00	E	1475.75	0.00
8670.00	89.354	94.086	7264.75	107.28	S	1501.92	E	1505.75	0.00
8700.00	89.354	94.086	7265.09	109.42	S	1531.85	E	1535.75	

0.00							
8730.00	89.354	94.086	7265.43	111.55	S	1561.77	E	1565.75
0.00							
8760.00	89.354	94.086	7265.76	113.69	S	1591.69	E	1595.74
0.00							
8790.00	89.354	94.086	7266.10	115.83	S	1621.61	E	1625.74
0.00							
8820.00	89.354	94.086	7266.44	117.97	S	1651.53	E	1655.74
0.00							
8850.00	89.354	94.086	7266.78	120.10	S	1681.45	E	1685.74
0.00							
8880.00	89.354	94.086	7267.12	122.24	S	1711.38	E	1715.74
0.00							
8910.00	89.354	94.086	7267.46	124.38	S	1741.30	E	1745.74
0.00							
8940.00	89.354	94.086	7267.79	126.52	S	1771.22	E	1775.73
0.00							
8970.00	89.354	94.086	7268.13	128.65	S	1801.14	E	1805.73
0.00							
9000.00	89.354	94.086	7268.47	130.79	S	1831.06	E	1835.73
0.00							
9030.00	89.354	94.086	7268.81	132.93	S	1860.99	E	1865.73
0.00							
9060.00	89.354	94.086	7269.15	135.06	S	1890.91	E	1895.73
0.00							
9090.00	89.354	94.086	7269.49	137.20	S	1920.83	E	1925.72
0.00							
9120.00	89.354	94.086	7269.82	139.34	S	1950.75	E	1955.72
0.00							
9150.00	89.354	94.086	7270.16	141.48	S	1980.67	E	1985.72
0.00							
9180.00	89.354	94.086	7270.50	143.61	S	2010.60	E	2015.72
0.00							
9210.00	89.354	94.086	7270.84	145.75	S	2040.52	E	2045.72
0.00							
9240.00	89.354	94.086	7271.18	147.89	S	2070.44	E	2075.71
0.00							
9270.00	89.354	94.086	7271.51	150.03	S	2100.36	E	2105.71
0.00							
9300.00	89.354	94.086	7271.85	152.16	S	2130.28	E	2135.71
0.00							
9330.00	89.354	94.086	7272.19	154.30	S	2160.20	E	2165.71
0.00							
9360.00	89.354	94.086	7272.53	156.44	S	2190.13	E	2195.71
0.00							
9390.00	89.354	94.086	7272.87	158.57	S	2220.05	E	2225.70
0.00							
9420.00	89.354	94.086	7273.21	160.71	S	2249.97	E	2255.70
0.00							
9450.00	89.354	94.086	7273.54	162.85	S	2279.89	E	2285.70
0.00							
9480.00	89.354	94.086	7273.88	164.99	S	2309.81	E	2315.70
0.00							
9510.00	89.354	94.086	7274.22	167.12	S	2339.74	E	2345.70
0.00							
9540.00	89.354	94.086	7274.56	169.26	S	2369.66	E	2375.70
0.00							
9570.00	89.354	94.086	7274.90	171.40	S	2399.58	E	2405.69
0.00							
9600.00	89.354	94.086	7275.24	173.54	S	2429.50	E	2435.69
0.00							
9630.00	89.354	94.086	7275.57	175.67	S	2459.42	E	2465.69
0.00							

9660.00	89.354	94.086	7275.91	177.81	S	2489.35	E	2495.69	0.00
9690.00	89.354	94.086	7276.25	179.95	S	2519.27	E	2525.69	0.00
9720.00	89.354	94.086	7276.59	182.08	S	2549.19	E	2555.68	0.00
9750.00	89.354	94.086	7276.93	184.22	S	2579.11	E	2585.68	0.00
9780.00	89.354	94.086	7277.27	186.36	S	2609.03	E	2615.68	0.00
9810.00	89.354	94.086	7277.60	188.50	S	2638.95	E	2645.68	0.00
9840.00	89.354	94.086	7277.94	190.63	S	2668.88	E	2675.68	0.00
9870.00	89.354	94.086	7278.28	192.77	S	2698.80	E	2705.67	0.00
9900.00	89.354	94.086	7278.62	194.91	S	2728.72	E	2735.67	0.00
9930.00	89.354	94.086	7278.96	197.05	S	2758.64	E	2765.67	0.00
9960.00	89.354	94.086	7279.30	199.18	S	2788.56	E	2795.67	0.00
9990.00	89.354	94.086	7279.63	201.32	S	2818.49	E	2825.67	0.00
10020.00	89.354	94.086	7279.97	203.46	S	2848.41	E	2855.66	0.00
10050.00	89.354	94.086	7280.31	205.59	S	2878.33	E	2885.66	0.00
10080.00	89.354	94.086	7280.65	207.73	S	2908.25	E	2915.66	0.00
10110.00	89.354	94.086	7280.99	209.87	S	2938.17	E	2945.66	0.00
10140.00	89.354	94.086	7281.32	212.01	S	2968.09	E	2975.66	0.00
10170.00	89.354	94.086	7281.66	214.14	S	2998.02	E	3005.66	0.00
10200.00	89.354	94.086	7282.00	216.28	S	3027.94	E	3035.65	0.00
10230.00	89.354	94.086	7282.34	218.42	S	3057.86	E	3065.65	0.00
10260.00	89.354	94.086	7282.68	220.56	S	3087.78	E	3095.65	0.00
10290.00	89.354	94.086	7283.02	222.69	S	3117.70	E	3125.65	0.00
10320.00	89.354	94.086	7283.35	224.83	S	3147.63	E	3155.65	0.00
10350.00	89.354	94.086	7283.69	226.97	S	3177.55	E	3185.64	0.00
10380.00	89.354	94.086	7284.03	229.10	S	3207.47	E	3215.64	0.00
10410.00	89.354	94.086	7284.37	231.24	S	3237.39	E	3245.64	0.00
10440.00	89.354	94.086	7284.71	233.38	S	3267.31	E	3275.64	0.00
10470.00	89.354	94.086	7285.05	235.52	S	3297.24	E	3305.64	0.00
10500.00	89.354	94.086	7285.38	237.65	S	3327.16	E	3335.63	0.00
10530.00	89.354	94.086	7285.72	239.79	S	3357.08	E	3365.63	0.00
10560.00	89.354	94.086	7286.06	241.93	S	3387.00	E	3395.63	0.00
10590.00	89.354	94.086	7286.40	244.07	S	3416.92	E	3425.63	

0.00							
10620.00	89.354	94.086	7286.74	246.20	S	3446.84	E 3455.63
0.00							
10650.00	89.354	94.086	7287.08	248.34	S	3476.77	E 3485.62
0.00							
10680.00	89.354	94.086	7287.41	250.48	S	3506.69	E 3515.62
0.00							
10710.00	89.354	94.086	7287.75	252.62	S	3536.61	E 3545.62
0.00							
10740.00	89.354	94.086	7288.09	254.75	S	3566.53	E 3575.62
0.00							
10770.00	89.354	94.086	7288.43	256.89	S	3596.45	E 3605.62
0.00							
10800.00	89.354	94.086	7288.77	259.03	S	3626.38	E 3635.61
0.00							
10830.00	89.354	94.086	7289.11	261.16	S	3656.30	E 3665.61
0.00							
10860.00	89.354	94.086	7289.44	263.30	S	3686.22	E 3695.61
0.00							
10890.00	89.354	94.086	7289.78	265.44	S	3716.14	E 3725.61
0.00							
10920.00	89.354	94.086	7290.12	267.58	S	3746.06	E 3755.61
0.00							
10950.00	89.354	94.086	7290.46	269.71	S	3775.99	E 3785.61
0.00							
10980.00	89.354	94.086	7290.80	271.85	S	3805.91	E 3815.60
0.00							
11010.00	89.354	94.086	7291.13	273.99	S	3835.83	E 3845.60
0.00							
11040.00	89.354	94.086	7291.47	276.13	S	3865.75	E 3875.60
0.00							
11070.00	89.354	94.086	7291.81	278.26	S	3895.67	E 3905.60
0.00							
11100.00	89.354	94.086	7292.15	280.40	S	3925.59	E 3935.60
0.00							
11130.00	89.354	94.086	7292.49	282.54	S	3955.52	E 3965.59
0.00							
11160.00	89.354	94.086	7292.83	284.67	S	3985.44	E 3995.59
0.00							
11190.00	89.354	94.086	7293.16	286.81	S	4015.36	E 4025.59
0.00							
11220.00	89.354	94.086	7293.50	288.95	S	4045.28	E 4055.59
0.00							
11250.00	89.354	94.086	7293.84	291.09	S	4075.20	E 4085.59
0.00							
11280.00	89.354	94.086	7294.18	293.22	S	4105.13	E 4115.58
0.00							
11310.00	89.354	94.086	7294.52	295.36	S	4135.05	E 4145.58
0.00							
11340.00	89.354	94.086	7294.86	297.50	S	4164.97	E 4175.58
0.00							
11370.00	89.354	94.086	7295.19	299.64	S	4194.89	E 4205.58
0.00							
11400.00	89.354	94.086	7295.53	301.77	S	4224.81	E 4235.58
0.00							
11430.00	89.354	94.086	7295.87	303.91	S	4254.73	E 4265.57
0.00							
11460.00	89.354	94.086	7296.21	306.05	S	4284.66	E 4295.57
0.00							
11490.00	89.354	94.086	7296.55	308.18	S	4314.58	E 4325.57
0.00							
11520.00	89.354	94.086	7296.89	310.32	S	4344.50	E 4355.57
0.00							

11550.00	89.354	94.086	7297.22	312.46 S	4374.42 E	4385.57	0.00
11580.00	89.354	94.086	7297.56	314.60 S	4404.34 E	4415.57	0.00
11610.00	89.354	94.086	7297.90	316.73 S	4434.27 E	4445.56	0.00
11640.00	89.354	94.086	7298.24	318.87 S	4464.19 E	4475.56	0.00
11670.00	89.354	94.086	7298.58	321.01 S	4494.11 E	4505.56	0.00
11700.00	89.354	94.086	7298.92	323.15 S	4524.03 E	4535.56	0.00
11730.00	89.354	94.086	7299.25	325.28 S	4553.95 E	4565.56	0.00
11760.00	89.354	94.086	7299.59	327.42 S	4583.88 E	4595.55	0.00
11790.00	89.354	94.086	7299.93	329.56 S	4613.80 E	4625.55	0.00
11796.22	89.354	94.086	7300.00	330.00 S	4620.00 E	4631.77	0.00

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

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Site and calculated along an Azimuth of 94.086° (Grid).

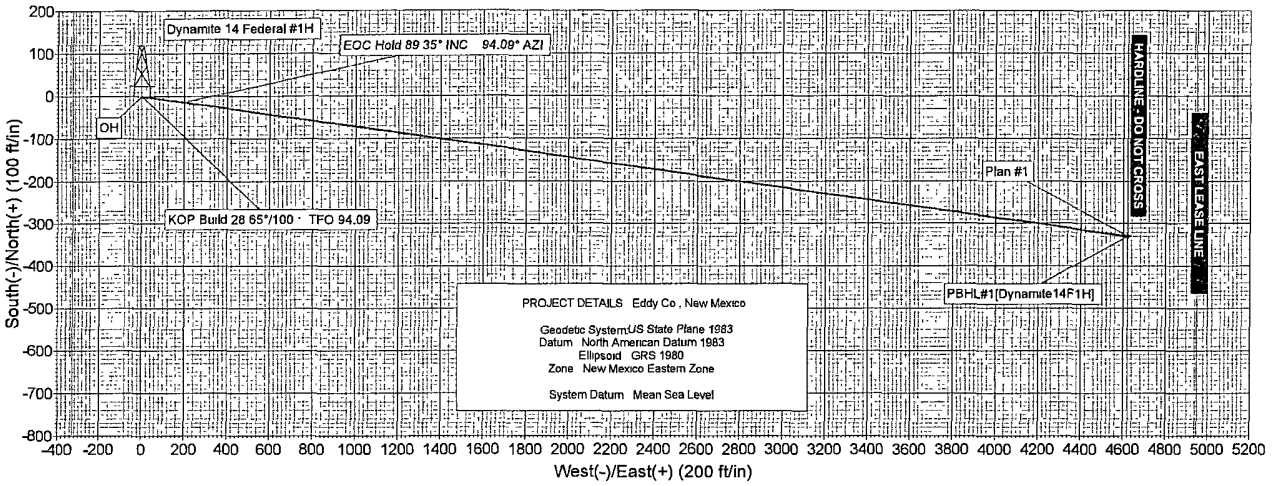
Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.
Central meridian is -104.333°.
Grid Convergence at Surface is 0.152°.

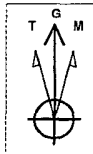
Based upon Minimum Curvature type calculations, at a Measured Depth of 11796.22ft., the Bottom Hole Displacement is 4631.77ft., in the Direction of 94.086° (Grid).

CIMAREX

Project Eddy Co., New Mexico
Site Dynamite 14 Federal #1H
Well Dynamite 14 Federal #1H
Wellbore Lateral #1
Plan Plan #1 (Dynamite 14 Federal #1H/Lateral #1)

BLACK VIPER ENERGY SERVICES, LTD





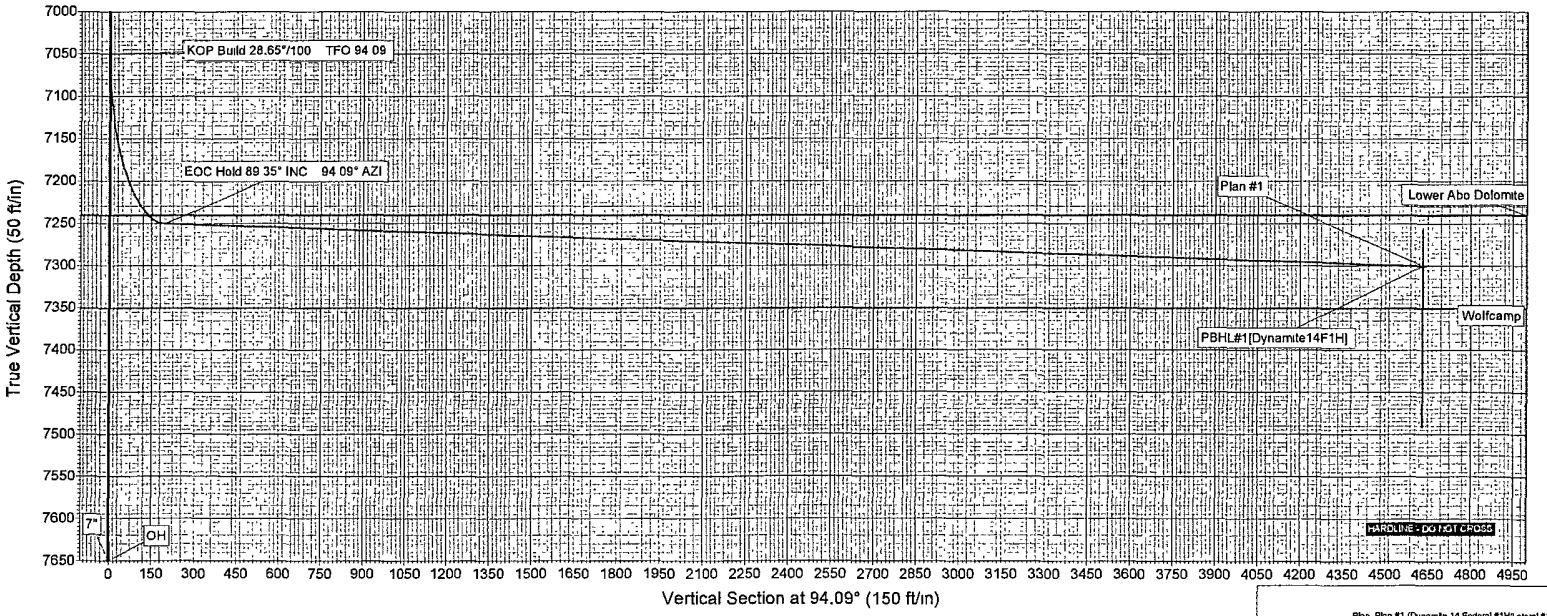
Azimuths to Grid North
True North -0.15°
Magnetic North: 8.10°
Magnetic Field
Strength 49344 1nT
Dip Angle 60.85°
Date 1/28/2008
Model IGRF200510

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	7050.00	0 00	0.00	7050.00	0.00	0 00	0.00	0 00	0 00	
2	7361.92	89 35	94.09	7250.00	-14 09	197.25	28 65	94.09	197 76	
3	11796.22	89.35	94.09	7300.00	-330.00	4620 00	0 00	0 00	4631 77	PBHL#1[Dynamite14F1H]

ANNOTATIONS

TVD	MD	Annotation
7050 00	7050 00	KOP Build 28 65°/100 . TFO 94.09
7250 00	7361.92	EOC Hold 89 35° INC · 94 09° AZI



Plan Plan #1 (Dynamite 14 Federal #1H/Lateral #1)
Created By Heather Vannoy Date January 28 2008

Cimarex Energy Co., Inc.

Eddy Co., New Mexico
Dynamite 14 Federal #1H
Dynamite 14 Federal #1H
Lateral #1

Plan: Plan #1

Standard Survey Report

28 January, 2008

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc.	**Local Co-ordinate Reference:**	Well Dynamite 14 Federal #1H
Project:	Eddy Co., New Mexico	**TVD Reference:**	WELL @ 3708.00ft (Original Well Elev)
Site:	Dynamite 14 Federal #1H	**MD Reference:**	WELL @ 3708.00ft (Original Well Elev)
Well:	Dynamite 14 Federal #1H	**North Reference:**	Grid
Wellbore:	Lateral #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #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 Dynamite 14 Federal #1H, Sec 14, T16S, R29E

Site Position:		**Northing:**	700,147.80 ft	**Latitude:**	32° 55' 27.846 N
From:	Map	**Easting:**	627,352.00 ft	**Longitude:**	104° 3' 10.844 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0.15 °

Well Dynamite 14 Federal #1H

Well Position	**+N/-S**	0.00 ft	**Northing:**	700,147.80 ft	**Latitude:**	32° 55' 27.846 N
	+E/-W	0.00 ft	**Easting:**	627,352.00 ft	**Longitude:**	104° 3' 10.844 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	1/28/2008	8.25	60.85	49,344

Design Plan #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	7,050.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	94.09

Survey Tool Program Date 1/28/2008

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
7,050.00	11,796.22	Plan #1 (Lateral #1)	MWD	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)
7,050.00	0.00	0.00	7,050.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Build 28.65°/100 :: TFO 94.09									
7,080.00	8.59	94.09	7,079.89	-0.16	2.24	2.25	28.65	28.65	0.00
7,110.00	17.19	94.09	7,109.10	-0.64	8.91	8.93	28.65	28.65	0.00
7,140.00	25.78	94.09	7,136.99	-1.42	19.86	19.91	28.65	28.65	0.00
7,170.00	34.38	94.09	7,162.93	-2.49	34.84	34.93	28.65	28.65	0.00
7,200.00	42.97	94.09	7,186.33	-3.82	53.52	53.66	28.65	28.65	0.00
7,230.00	51.56	94.09	7,206.67	-5.39	75.48	75.67	28.65	28.65	0.00
7,260.00	60.16	94.09	7,223.49	-7.16	100.23	100.48	28.65	28.65	0.00
7,290.00	68.75	94.09	7,236.41	-9.09	127.20	127.52	28.65	28.65	0.00
7,300.62	71.79	94.09	7,240.00	-9.80	137.17	137.52	28.65	28.65	0.00
Lower Abo Dolomite									
7,320.00	77.34	94.09	7,245.15	-11.13	155.79	156.19	28.65	28.65	0.00

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Dynamite 14 Federal #1H
Project:	Eddy Co., New Mexico	TVD Reference:	WELL @ 3708.00ft (Original Well Elev)
Site:	Dynamite 14 Federal #1H	MD Reference:	WELL @ 3708.00ft (Original Well Elev)
Well:	Dynamite 14 Federal #1H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003.14 Server Db

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,350.00	85.94	94.09	7,249.51	-13.24	185.37	185.85	28.65	28.65	0.00
7,361 92	89.35	94.09	7,250 00	-14.09	197.25	197.76	28 65	28.65	0.00
EOC Hold 89.35° INC :: 94.09° AZI									
7,380.00	89.35	94.09	7,250 20	-15.38	215 28	215.83	0.00	0.00	0 00
7,410.00	89.35	94.09	7,250.54	-17.51	245 21	245.83	0.00	0.00	0.00
7,440 00	89.35	94.09	7,250 88	-19.65	275.13	275 83	0.00	0.00	0.00
7,470.00	89.35	94.09	7,251.22	-21.79	305.05	305.83	0.00	0 00	0.00
7,500.00	89.35	94.09	7,251.56	-23.93	334.97	335.82	0.00	0.00	0.00
7,530.00	89.35	94.09	7,251.90	-26.06	364.89	365.82	0.00	0 00	0.00
7,560.00	89.35	94.09	7,252 23	-28.20	394.82	395 82	0.00	0.00	0.00
7,590 00	89.35	94.09	7,252 57	-30.34	424.74	425.82	0 00	0.00	0 00
7,620 00	89.35	94.09	7,252.91	-32.48	454.66	455.82	0 00	0.00	0 00
7,650 00	89.35	94.09	7,253 25	-34.61	484.58	485 82	0 00	0.00	0 00
7,680.00	89.35	94.09	7,253.59	-36.75	514.50	515.81	0.00	0 00	0.00
7,710 00	89.35	94.09	7,253.92	-38.89	544.42	545.81	0.00	0.00	0.00
7,740 00	89.35	94.09	7,254.26	-41.02	574 35	575.81	0.00	0.00	0.00
7,770.00	89.35	94.09	7,254.60	-43.16	604 27	605.81	0.00	0 00	0.00
7,800.00	89.35	94.09	7,254.94	-45.30	634 19	635.81	0.00	0.00	0.00
7,830.00	89.35	94.09	7,255.28	-47.44	664.11	665.80	0 00	0.00	0.00
7,860 00	89.35	94.09	7,255.62	-49.57	694.03	695.80	0.00	0.00	0 00
7,890.00	89 35	94.09	7,255.95	-51.71	723.96	725.80	0.00	0.00	0.00
7,920 00	89.35	94.09	7,256 29	-53.85	753.88	755.80	0.00	0.00	0 00
7,950.00	89.35	94.09	7,256 63	-55.99	783.80	785.80	0.00	0.00	0 00
7,980.00	89.35	94.09	7,256.97	-58 12	813.72	815 79	0 00	0.00	0.00
8,010.00	89.35	94.09	7,257.31	-60.26	843.64	845.79	0.00	0.00	0.00
8,040 00	89.35	94.09	7,257.65	-62.40	873.56	875.79	0.00	0.00	0 00
8,070.00	89.35	94.09	7,257.98	-64.53	903.49	905.79	0.00	0.00	0.00
8,100.00	89.35	94.09	7,258.32	-66.67	933.41	935.79	0.00	0.00	0.00
8,130 00	89.35	94.09	7,258 66	-68.81	963 33	965.78	0.00	0.00	0.00
8,160.00	89.35	94.09	7,259.00	-70.95	993.25	995.78	0 00	0.00	0.00
8,190.00	89.35	94.09	7,259.34	-73.08	1,023.17	1,025.78	0.00	0.00	0.00
8,220.00	89 35	94.09	7,259.68	-75.22	1,053 10	1,055 78	0.00	0.00	0.00
8,250.00	89.35	94.09	7,260.01	-77.36	1,083.02	1,085.78	0.00	0 00	0.00
8,280 00	89.35	94.09	7,260.35	-79.50	1,112.94	1,115.78	0.00	0.00	0.00
8,310.00	89.35	94.09	7,260.69	-81.63	1,142.86	1,145 77	0.00	0.00	0.00
8,340.00	89.35	94 09	7,261.03	-83.77	1,172.78	1,175.77	0.00	0 00	0.00
8,370 00	89.35	94.09	7,261.37	-85.91	1,202 71	1,205 77	0.00	0.00	0.00
8,400.00	89.35	94.09	7,261.71	-88.04	1,232.63	1,235 77	0 00	0 00	0.00
8,430 00	89.35	94.09	7,262.04	-90.18	1,262.55	1,265 77	0.00	0 00	0.00
8,460 00	89.35	94.09	7,262.38	-92.32	1,292.47	1,295.76	0.00	0.00	0.00
8,490 00	89 35	94.09	7,262 72	-94.46	1,322.39	1,325.76	0.00	0 00	0.00
8,520.00	89.35	94.09	7,263.06	-96.59	1,352.31	1,355.76	0.00	0.00	0.00
8,550.00	89.35	94.09	7,263.40	-98.73	1,382 24	1,385.76	0.00	0.00	0 00
8,580.00	89.35	94.09	7,263.73	-100.87	1,412 16	1,415.76	0.00	0.00	0.00
8,610.00	89.35	94.09	7,264.07	-103.01	1,442.08	1,445.75	0.00	0 00	0.00
8,640.00	89 35	94.09	7,264.41	-105 14	1,472.00	1,475.75	0.00	0.00	0.00
8,670.00	89.35	94.09	7,264.75	-107.28	1,501.92	1,505.75	0.00	0.00	0.00
8,700.00	89.35	94.09	7,265.09	-109.42	1,531.85	1,535.75	0.00	0.00	0.00
8,730.00	89.35	94 09	7,265.43	-111.55	1,561.77	1,565 75	0.00	0.00	0.00
8,760.00	89.35	94.09	7,265 76	-113.69	1,591.69	1,595.74	0.00	0.00	0.00
8,790 00	89.35	94.09	7,266.10	-115.83	1,621.61	1,625.74	0 00	0 00	0 00
8,820.00	89.35	94.09	7,266.44	-117.97	1,651.53	1,655.74	0.00	0.00	0.00
8,850.00	89.35	94.09	7,266.78	-120.10	1,681.45	1,685.74	0.00	0.00	0.00
8,880.00	89.35	94.09	7,267.12	-122.24	1,711.38	1,715.74	0.00	0.00	0.00
8,910.00	89.35	94.09	7,267.46	-124.38	1,741.30	1,745.74	0.00	0.00	0.00

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc.	**Local Co-ordinate Reference:**	Well Dynamite 14 Federal #1H
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Site:	Dynamite 14 Federal #1H	**MD Reference:**	WELL @ 3708.00ft (Original Well Elev)
Well:	Dynamite 14 Federal #1H	**North Reference:**	Grid
Wellbore:	Lateral #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.14 Server Db

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,940 00	89.35	94.09	7,267.79	-126.52	1,771.22	1,775.73	0.00	0.00	0.00
8,970.00	89.35	94.09	7,268.13	-128.65	1,801 14	1,805.73	0.00	0.00	0.00
9,000.00	89.35	94.09	7,268.47	-130 79	1,831.06	1,835.73	0.00	0.00	0.00
9,030.00	89.35	94.09	7,268.81	-132.93	1,860.99	1,865.73	0.00	0.00	0.00
9,060.00	89.35	94.09	7,269 15	-135.06	1,890.91	1,895.73	0 00	0.00	0.00
9,090.00	89.35	94.09	7,269.49	-137.20	1,920.83	1,925.72	0.00	0.00	0 00
9,120.00	89.35	94.09	7,269.82	-139.34	1,950.75	1,955.72	0 00	0.00	0.00
9,150.00	89.35	94.09	7,270.16	-141.48	1,980.67	1,985.72	0.00	0.00	0.00
9,180.00	89.35	94.09	7,270 50	-143 61	2,010.60	2,015.72	0.00	0 00	0 00
9,210.00	89.35	94.09	7,270 84	-145.75	2,040.52	2,045.72	0 00	0 00	0 00
9,240 00	89.35	94.09	7,271.18	-147.89	2,070.44	2,075.71	0.00	0.00	0.00
9,270.00	89.35	94.09	7,271.51	-150.03	2,100.36	2,105 71	0.00	0.00	0.00
9,300.00	89.35	94.09	7,271.85	-152.16	2,130.28	2,135.71	0.00	0.00	0.00
9,330.00	89.35	94.09	7,272.19	-154.30	2,160.20	2,165.71	0.00	0.00	0.00
9,360.00	89.35	94.09	7,272 53	-156.44	2,190 13	2,195.71	0.00	0 00	0.00
9,390.00	89 35	94.09	7,272.87	-158.57	2,220.05	2,225.70	0.00	0.00	0.00
9,420.00	89.35	94.09	7,273.21	-160.71	2,249.97	2,255.70	0.00	0.00	0.00
9,450.00	89.35	94.09	7,273.54	-162.85	2,279.89	2,285 70	0.00	0.00	0.00
9,480 00	89 35	94.09	7,273.88	-164.99	2,309.81	2,315 70	0.00	0.00	0.00
9,510.00	89.35	94 09	7,274 22	-167.12	2,339.74	2,345.70	0.00	0 00	0 00
9,540.00	89.35	94.09	7,274.56	-169.26	2,369.66	2,375.70	0 00	0.00	0.00
9,570.00	89 35	94 09	7,274.90	-171.40	2,399.58	2,405.69	0.00	0.00	0.00
9,600.00	89.35	94.09	7,275.24	-173.54	2,429.50	2,435.69	0.00	0.00	0.00
9,630.00	89.35	94.09	7,275.57	-175.67	2,459.42	2,465 69	0.00	0.00	0.00
9,660.00	89.35	94.09	7,275.91	-177.81	2,489.35	2,495 69	0.00	0.00	0.00
9,690.00	89.35	94.09	7,276.25	-179.95	2,519.27	2,525.69	0.00	0.00	0.00
9,720 00	89 35	94 09	7,276.59	-182.08	2,549.19	2,555.68	0 00	0.00	0.00
9,750.00	89.35	94.09	7,276.93	-184.22	2,579.11	2,585.68	0.00	0.00	0 00
9,780 00	89.35	94.09	7,277.27	-186.36	2,609 03	2,615.68	0.00	0 00	0 00
9,810.00	89.35	94.09	7,277.60	-188.50	2,638.95	2,645.68	0.00	0.00	0.00
9,840.00	89.35	94.09	7,277.94	-190.63	2,668 88	2,675 68	0.00	0.00	0 00
9,870.00	89.35	94.09	7,278.28	-192.77	2,698.80	2,705.67	0.00	0.00	0 00
9,900.00	89.35	94.09	7,278.62	-194.91	2,728.72	2,735.67	0.00	0.00	0.00
9,930.00	89.35	94.09	7,278.96	-197.05	2,758.64	2,765.67	0.00	0.00	0 00
9,960.00	89.35	94.09	7,279.30	-199.18	2,788.56	2,795.67	0.00	0 00	0.00
9,990.00	89.35	94.09	7,279.63	-201.32	2,818.49	2,825.67	0.00	0.00	0.00
10,020.00	89 35	94.09	7,279 97	-203.46	2,848.41	2,855 66	0.00	0.00	0.00
10,050.00	89.35	94.09	7,280.31	-205.59	2,878.33	2,885.66	0.00	0 00	0.00
10,080.00	89.35	94.09	7,280.65	-207.73	2,908.25	2,915.66	0.00	0 00	0 00
10,110.00	89.35	94.09	7,280 99	-209.87	2,938.17	2,945 66	0.00	0 00	0 00
10,140 00	89.35	94.09	7,281.32	-212.01	2,968.09	2,975.66	0 00	0.00	0.00
10,170.00	89.35	94.09	7,281.66	-214.14	2,998.02	3,005 66	0.00	0.00	0.00
10,200.00	89.35	94.09	7,282 00	-216.28	3,027.94	3,035.65	0.00	0.00	0.00
10,230.00	89.35	94.09	7,282 34	-218.42	3,057.86	3,065.65	0.00	0.00	0.00
10,260.00	89.35	94.09	7,282.68	-220.56	3,087.78	3,095.65	0.00	0.00	0 00
10,290.00	89.35	94.09	7,283.02	-222.69	3,117.70	3,125.65	0.00	0.00	0 00
10,320.00	89.35	94.09	7,283.35	-224.83	3,147.63	3,155.65	0.00	0 00	0.00
10,350.00	89.35	94.09	7,283.69	-226.97	3,177.55	3,185.64	0.00	0.00	0.00
10,380.00	89.35	94.09	7,284.03	-229.10	3,207.47	3,215.64	0 00	0.00	0.00
10,410.00	89.35	94.09	7,284.37	-231.24	3,237.39	3,245.64	0.00	0.00	0.00
10,440.00	89.35	94.09	7,284.71	-233.38	3,267.31	3,275.64	0.00	0.00	0.00
10,470.00	89.35	94.09	7,285.05	-235.52	3,297.24	3,305.64	0.00	0.00	0.00
10,500.00	89.35	94.09	7,285 38	-237.65	3,327.16	3,335 63	0.00	0.00	0.00
10,530.00	89.35	94.09	7,285.72	-239.79	3,357.08	3,365.63	0 00	0.00	0 00
10,560.00	89.35	94.09	7,286.06	-241.93	3,387.00	3,395.63	0 00	0.00	0.00

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc.	**Local Co-ordinate Reference:**	Well Dynamite 14 Federal #1H
Project:	Eddy Co., New Mexico	**TVD Reference:**	WELL @ 3708.00ft (Original Well Elev)
Site:	Dynamite 14 Federal #1H	**MD Reference:**	WELL @ 3708.00ft (Original Well Elev)
Well:	Dynamite 14 Federal #1H	**North Reference:**	Grid
Wellbore:	Lateral #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.14 Server Db

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,590.00	89.35	94 09	7,286.40	-244.07	3,416.92	3,425.63	0.00	0.00	0.00
10,620.00	89.35	94.09	7,286 74	-246.20	3,446.84	3,455.63	0.00	0.00	0.00
10,650.00	89.35	94.09	7,287.08	-248.34	3,476.77	3,485.62	0.00	0 00	0.00
10,680.00	89.35	94.09	7,287.41	-250.48	3,506.69	3,515.62	0.00	0.00	0.00
10,710.00	89 35	94.09	7,287.75	-252 62	3,536.61	3,545.62	0.00	0 00	0.00
10,740.00	89 35	94.09	7,288.09	-254 75	3,566.53	3,575.62	0.00	0 00	0.00
10,770.00	89.35	94 09	7,288.43	-256.89	3,596.45	3,605.62	0.00	0.00	0.00
10,800.00	89.35	94 09	7,288.77	-259.03	3,626 38	3,635 61	0.00	0.00	0 00
10,830.00	89.35	94.09	7,289.11	-261.16	3,656.30	3,665.61	0.00	0.00	0 00
10,860.00	89 35	94.09	7,289 44	-263 30	3,686.22	3,695.61	0 00	0.00	0.00
10,890.00	89.35	94.09	7,289.78	-265 44	3,716.14	3,725.61	0.00	0 00	0.00
10,920.00	89.35	94.09	7,290.12	-267.58	3,746.06	3,755.61	0.00	0.00	0.00
10,950.00	89.35	94 09	7,290.46	-269 71	3,775 99	3,785 61	0.00	0.00	0 00
10,980 00	89.35	94.09	7,290.80	-271.85	3,805.91	3,815.60	0.00	0 00	0.00
11,010.00	89 35	94.09	7,291.13	-273 99	3,835.83	3,845.60	0.00	0.00	0.00
11,040.00	89.35	94.09	7,291.47	-276.13	3,865.75	3,875.60	0.00	0.00	0.00
11,070.00	89.35	94.09	7,291.81	-278.26	3,895.67	3,905.60	0.00	0.00	0.00
11,100.00	89 35	94.09	7,292.15	-280.40	3,925.59	3,935.60	0.00	0.00	0 00
11,130 00	89.35	94.09	7,292 49	-282.54	3,955.52	3,965.59	0.00	0.00	0.00
11,160.00	89.35	94.09	7,292.83	-284.67	3,985.44	3,995.59	0.00	0.00	0.00
11,190.00	89.35	94.09	7,293.16	-286.81	4,015.36	4,025.59	0.00	0.00	0.00
11,220.00	89.35	94.09	7,293.50	-288 95	4,045.28	4,055.59	0.00	0 00	0.00
11,250.00	89.35	94 09	7,293.84	-291.09	4,075.20	4,085.59	0.00	0.00	0.00
11,280.00	89.35	94.09	7,294.18	-293.22	4,105.13	4,115.58	0.00	0.00	0.00
11,310 00	89.35	94.09	7,294.52	-295.36	4,135 05	4,145.58	0.00	0.00	0 00
11,340.00	89.35	94.09	7,294.86	-297.50	4,164.97	4,175.58	0.00	0.00	0.00
11,370.00	89.35	94.09	7,295.19	-299 64	4,194.89	4,205.58	0.00	0.00	0.00
11,400.00	89.35	94.09	7,295.53	-301.77	4,224.81	4,235.58	0.00	0.00	0.00
11,430 00	89.35	94.09	7,295 87	-303.91	4,254 73	4,265 57	0.00	0.00	0 00
11,460.00	89.35	94.09	7,296.21	-306.05	4,284 66	4,295 57	0.00	0.00	0.00
11,490.00	89.35	94.09	7,296.55	-308.18	4,314.58	4,325.57	0.00	0.00	0.00
11,520.00	89.35	94.09	7,296.89	-310.32	4,344.50	4,355.57	0.00	0 00	0.00
11,550.00	89.35	94.09	7,297.22	-312.46	4,374.42	4,385.57	0.00	0.00	0 00
11,580.00	89.35	94.09	7,297.56	-314.60	4,404.34	4,415.57	0.00	0.00	0.00
11,610.00	89.35	94.09	7,297.90	-316.73	4,434.27	4,445.56	0.00	0.00	0.00
11,640.00	89.35	94.09	7,298.24	-318.87	4,464 19	4,475.56	0.00	0.00	0 00
11,670.00	89.35	94.09	7,298.58	-321 01	4,494.11	4,505.56	0.00	0 00	0.00
11,700.00	89.35	94 09	7,298.92	-323.15	4,524.03	4,535.56	0.00	0.00	0.00
11,730 00	89.35	94.09	7,299.25	-325.28	4,553.95	4,565.56	0.00	0 00	0.00
11,760.00	89.35	94.09	7,299.59	-327.42	4,583 88	4,595.55	0.00	0.00	0.00
11,790.00	89.35	94.09	7,299.93	-329.56	4,613.80	4,625.55	0.00	0.00	0.00
11,796 22	89.35	94.09	7,300.00	-330 00	4,620.00	4,631.77	0.00	0 00	0.00

Black Viper Energy

Survey Report

Company:	Cimarex Energy Co., Inc.	**Local Co-ordinate Reference:**	Well Dynamite 14 Federal #1H
Project:	Eddy Co., New Mexico	**TVD Reference:**	WELL @ 3708.00ft (Original Well Elev)
Site:	Dynamite 14 Federal #1H	**MD Reference:**	WELL @ 3708.00ft (Original Well Elev)
Well:	Dynamite 14 Federal #1H	**North Reference:**	Grid
Wellbore:	Lateral #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003 14 Server Db

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL#1[Dynamite14F1H - plan hits target - Point	0.00	0.00	7,300.00	-330.00	4,620.00	699,817.80	631,972.00	32° 55' 24.456 N	104° 2' 16.651 W

Formations

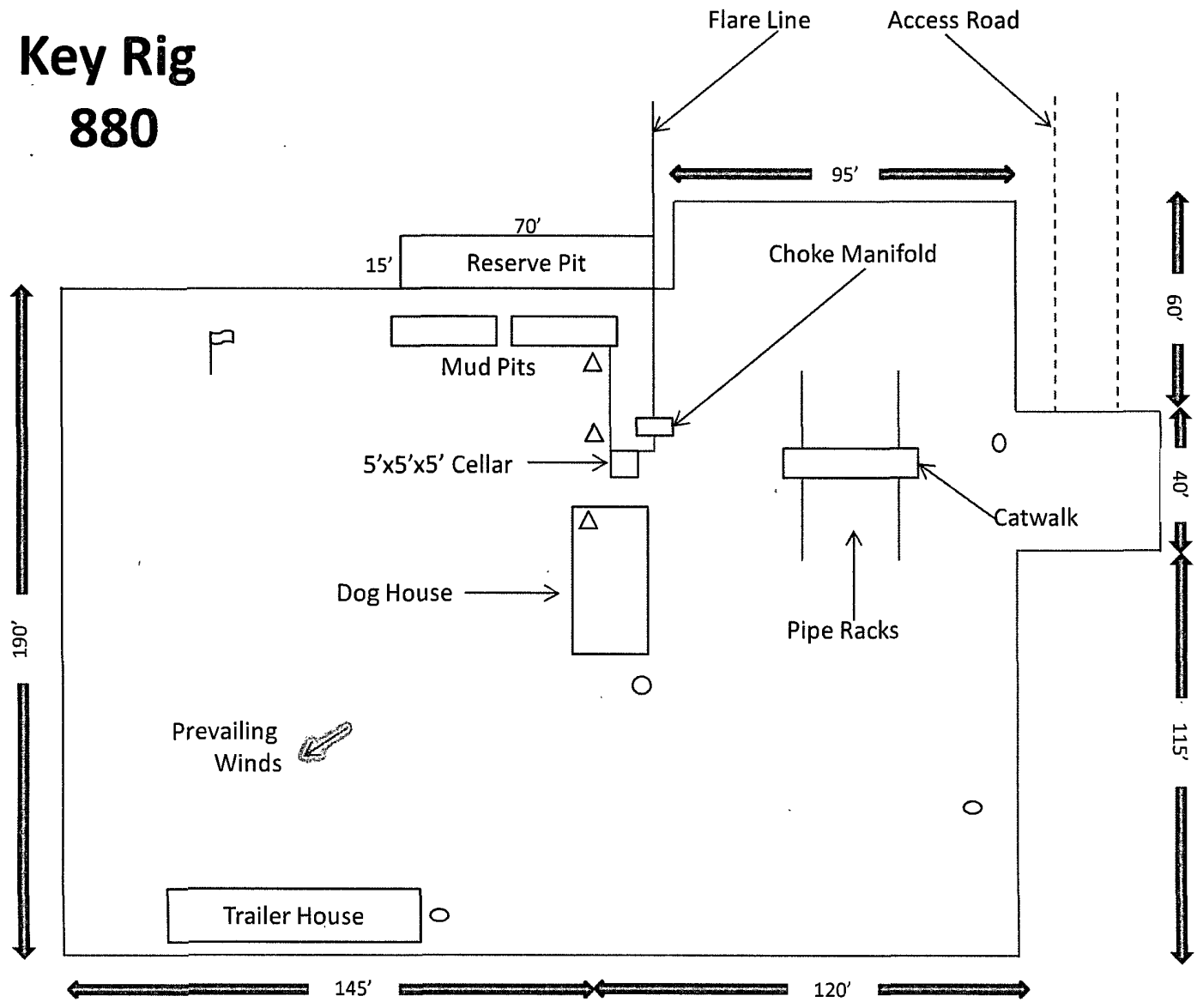
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,300.62	7,240.00	Lower Abo Dolomite	Dolomite	0.00	
	7,350.00	Wolfcamp		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
7,050.00	7,050.00	0.00	0.00	KOP Build 28 65°/100 :: TFO 94.09
7,361.92	7,250.00	-14.09	197.25	EOC Hold 89.35° INC :. 94.09° AZI

Checked By: _____ Approved By: _____ Date: _____

Key Rig 880



Wind Direction Indicators (wind sock or streamers)

△ H2S Monitors (alarms at bell nipple and shale shaker)

○ Briefing Areas

○ Remote BOP Closing Unit

Exhibit D – Rig Diagram
Dynamite 14 Federal No. 1
Cimarex Energy Co. of Colorado
14-16S-29E
SHL 1650' FNL & 330' FWL
BHL 1980' FNL & 330' FEL
Eddy County, NM

SR & A

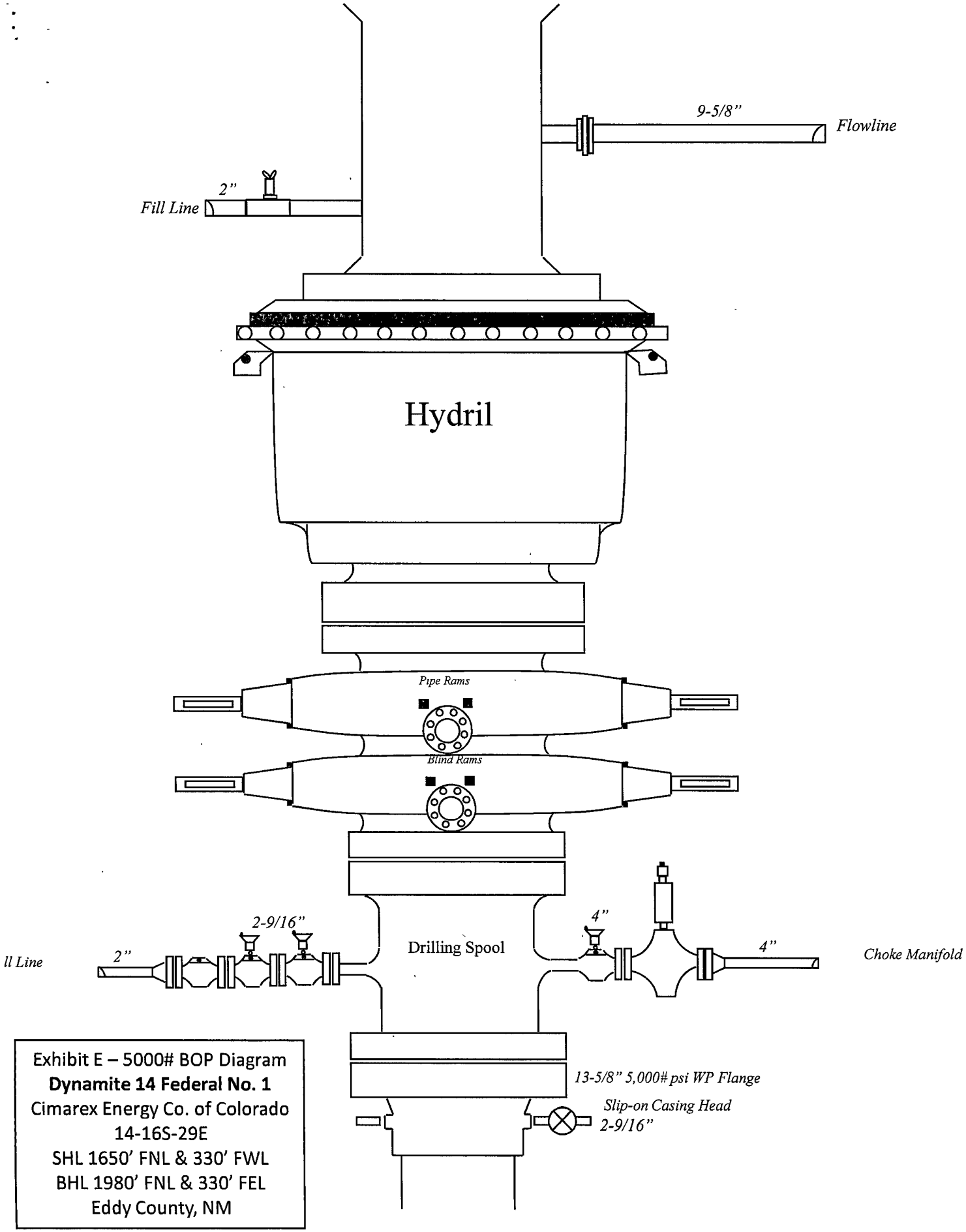


Exhibit E – 5000# BOP Diagram
Dynamite 14 Federal No. 1
Cimarex Energy Co. of Colorado
14-16S-29E
SHL 1650' FNL & 330' FWL
BHL 1980' FNL & 330' FEL
Eddy County, NM

DRILLING OPERATIONS
CHOKE MANIFOLD
5M SERVICE

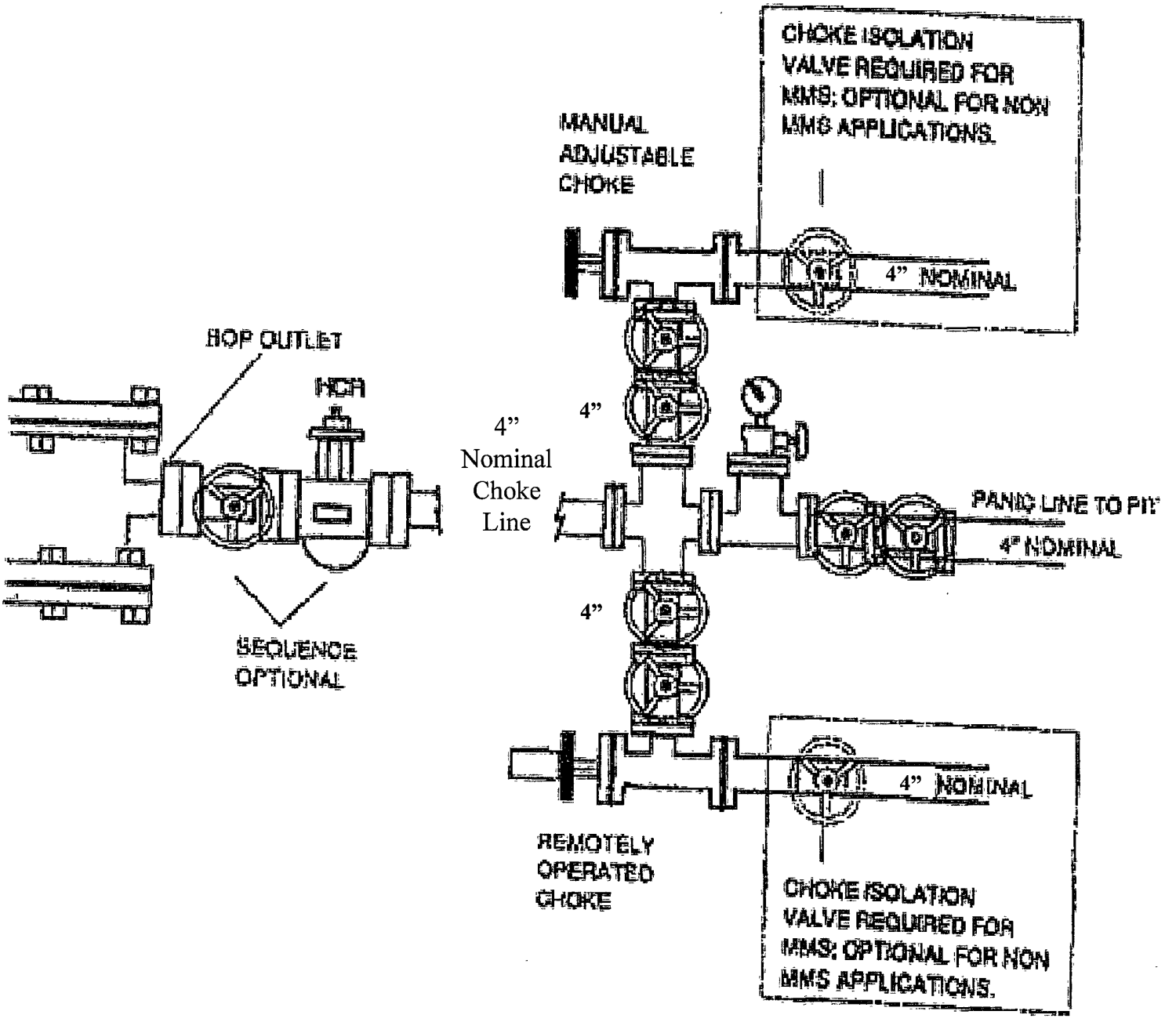


Exhibit E-1 – Choke Manifold Diagram
Dynamite 14 Federal No. 1
Cimarex Energy Co. of Colorado
14-16S-29E
SHL 1650' FNL & 330' FWL
BHL 1980' FNL & 330' FEL
Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan
Cimarex Energy Co. of Colorado
Dynamite 14 Federal No. 1
Unit E Section 14
T16S R29E Eddy County, NM

1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
   A. Characteristics of H2S
   B. Physical effects and hazards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H2S detectors, warning system and briefing areas.
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2 H2S Detection and Alarm Systems
   A. H2S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.

3 Windsock and/or wind streamers
   A. Windsock at mudpit area should be high enough to be visible.
   B. Windsock at briefing area should be high enough to be visible.

4 Condition Flags and Signs
   A. Warning sign on access road to location.
   B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H2S present in dangerous concentration). Only emergency personnel admitted to location.

5 Well control equipment
   A. See exhibit "E"

6 Communication
   A. While working under masks chalkboards will be used for communication.
   B. Hand signals will be used where chalk board is inappropriate.
   C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drillstem Testing
   No DSTs or cores are planned at this time.

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H2S scavengers if necessary.

Surface Use Plan
Cimarex Energy Co. of Colorado
Dynamite 14 Federal No. 1
Unit E Section 14
T16S R29E Eddy County, NM

1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Eddy Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.

A. Exhibit "A" shows the proposed well site as staked.

B. From the junction of US Hwy 82 and Barnival Draw, go North on Barnival Draw for 6.8 miles to lease road. On lease road, go East 2.5 miles to lease road; thence South 0.2 miles to lease road; thence West to proposed lease road.

2 Planned Access Roads: 269.4' of new road will be constructed on-lease.

3 Location od Existing Wells in a One-Mile Radius - Exhibit A

A. Water wells - None known

B. Disposal wells - None known

C. Drilling wells - None known

D. Producing wells - As shown on Exhibit "A"

E. Abandoned wells - As shown on Exhibit "A"

4 If on completion this well is a producer, Cimarex Energy Co. of Colorado will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied by a Sundry Notice.

5 Location and Type of Water Supply
Water will be purchased locally from a commercial source and trucked over the access roads or piped in flexible lines laid on top of the ground.

6 Source of Construction Material
If possible, construction will be obtained from the excavation of drill site. If additional material is needed, it will be purchased from a local source and transported over the access route as shown on Exhibit "C".

7 Methods of Handling Waste Material
A. Drill cuttings will be disopsed of in the reserve pit.
B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.
C. Salts remaining after completion of well will be picked up by supplier including broken sacks.
D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
E. Remaining drilling fluids will be allowed to dry in the reserve pit until the pit is dry enough for breaking out. In the event that drillings fluids do not dry out in a reasonable time they will be hauled off by transports and be disposed of at a State approved disposal facility. Water produced during drilling will be put in reserve pit. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

8 Ancillary Facilities
A. No camps or airstrips to be constructed.

9 Well Site Layout

A. Exhibit "D" shows location and rig layout.
B. This exhibit indicates proposed location of reserve and trash pits; and living facilities.
C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be lined with PVC or polyethylene liner. The pit liner will be 20 mils thick. Pit liner will extend a minimum, 2'00" over the reserve pits dikes where the liner will be anchored down.
D. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10 Plans for Restoration of Surface

Rehabilitation of the location and cuttings burial cell will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recountoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

11 Other Information

A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.

B. The wellsite is on surface owned by Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.

C. An Archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Carlsbad BLM office.

D. There are no know dwellings within 1 1/2 miles of this location.

Operator Certification Statement
Cimarex Energy Co. of Colorado
Dynamite 14 Federal No. 1
Unit E Section 14
T16S R29E Eddy County, NM

Operator's Representative

Cimarex Energy Co. of Colorado
P.O. Box 140907
Irving, TX 75014
Office Phone: (972) 443-6489
Zeno Farris

CERTIFICATION: I hereby certify that the statements and plans made in this APD are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Cimarex Energy Co. of Colorado and/or its contractors/subcontractors and is in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME: Zeno Farris
Zeno Farris

DATE: January 29, 2008

TITLE: Manager Operations Administration

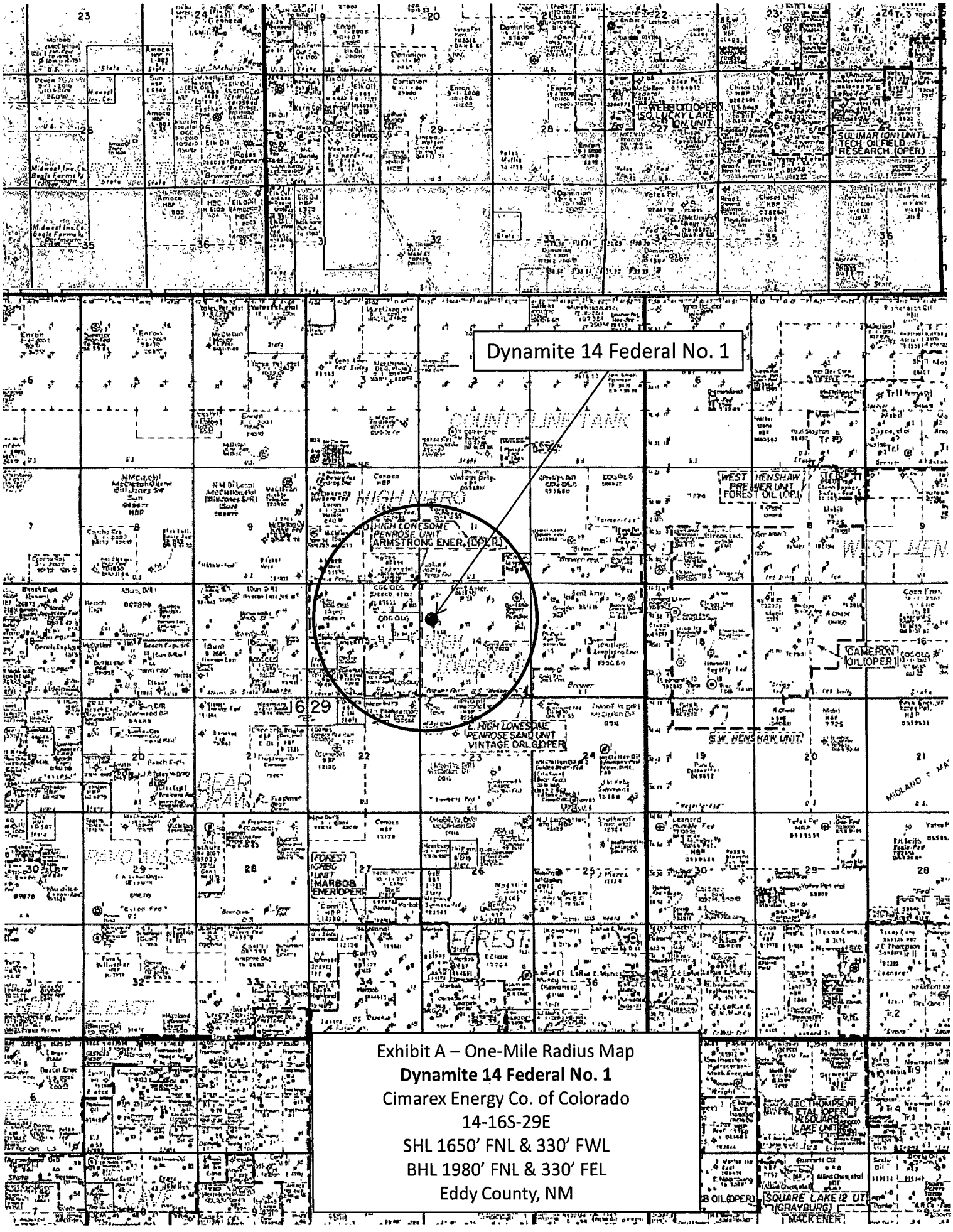


Exhibit A – One-Mile Radius Map

Dynamite 14 Federal No. 1

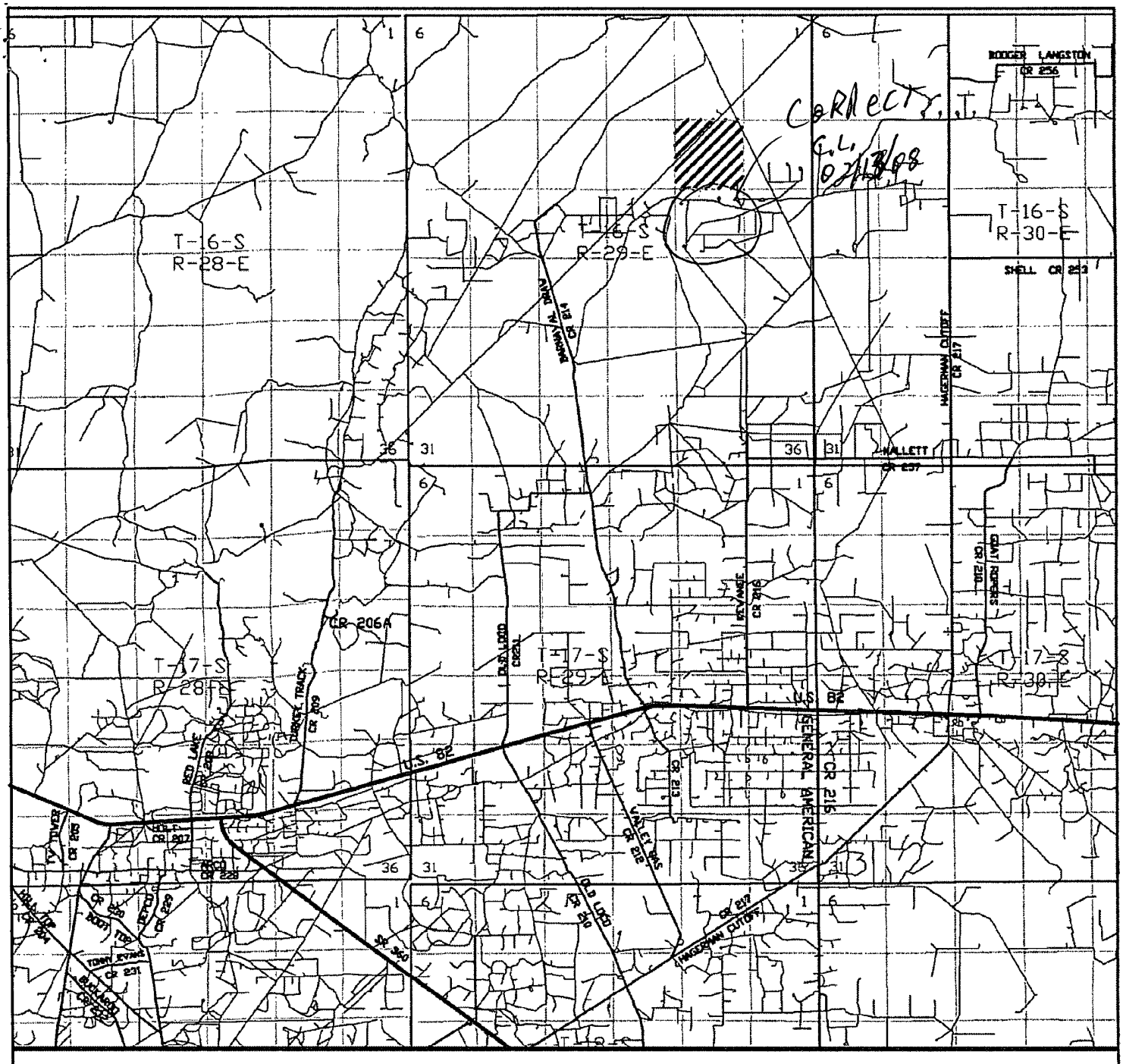
Cimarex Energy Co. of Colorado

14-16S-29E

SHL 1650' FNL & 330' FWL

BHL 1980' FNL & 330' FEL

Eddy County, NM



DYNAMITE "14" FEDERAL #1H
Located 1650' FNL and 330' FWL
Section 14, Township 16 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

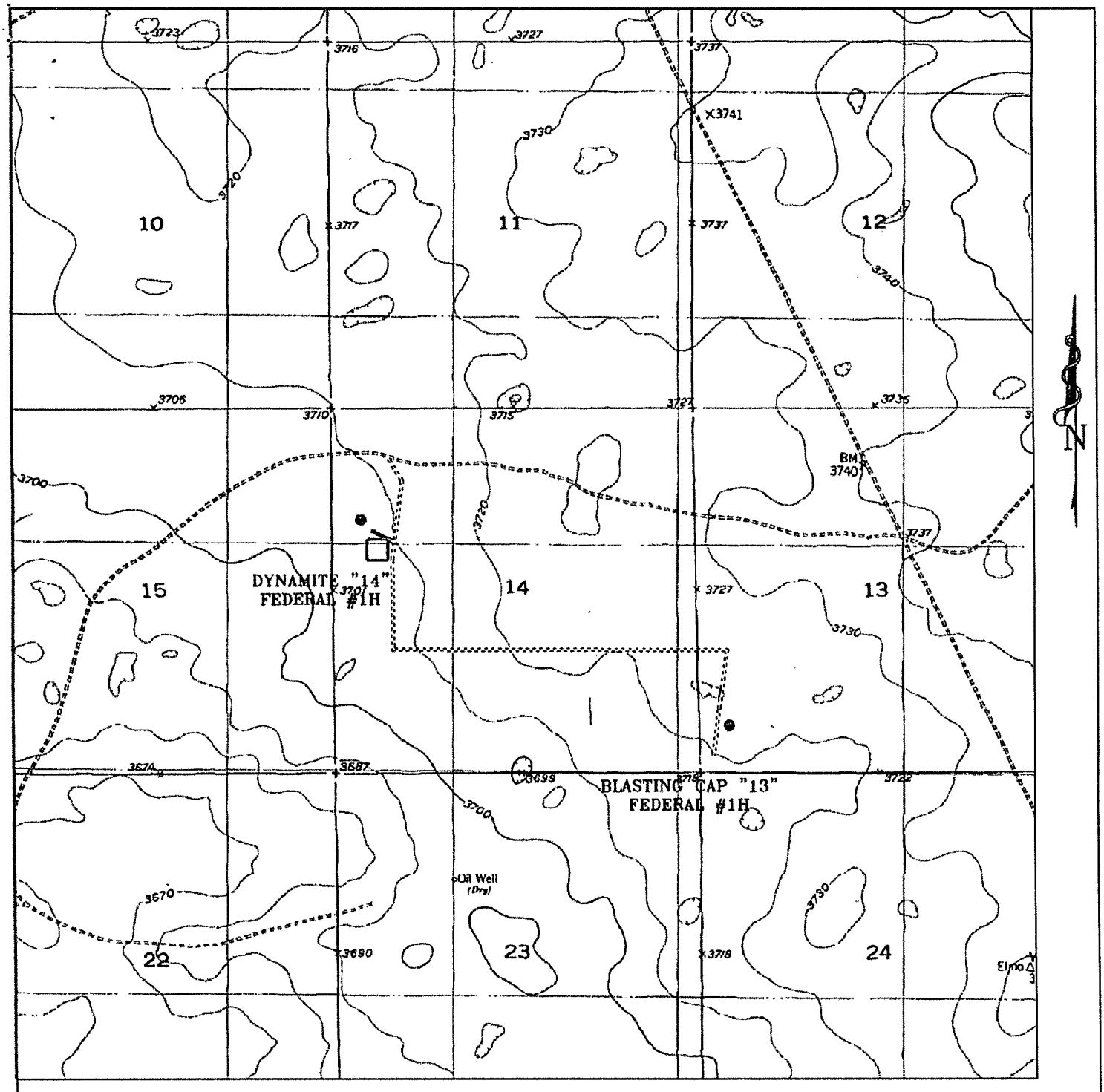
basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	JMS 19027TR
Survey Date:	01-19-2008
Scale:	1" = 2 MILES
Date:	01-22-2008

CIMAREX ENERGY CO. OF COLORADO

Exhibit B



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(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	JMS 19027T
Survey Date:	01-19-2008
Scale:	1" = 2000'
Date:	01-22-2008

CIMAREX ENERGY CO. OF COLORADO

Exhibit C

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy Co. of Colorado
LEASE NO.:	LC061638
WELL NAME & NO.:	Dynamite 14 Federal No. 1
SURFACE HOLE FOOTAGE:	1650' FNL & 330' FWL
BOTTOM HOLE FOOTAGE	1980' FNL & 330' FEL
LOCATION:	Section 14, T. 16 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Mitigation Measures: The mitigation measures include the special drilling stipulations, the standard stipulations for permanent resource roads, and the standard stipulations for the Lesser Prairie Chicken.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 15 through June 15 annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Dynamite 14 Federal # 1: Pit North V- Door East

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 70' X 15' on the North side of the well pad V-Door East.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

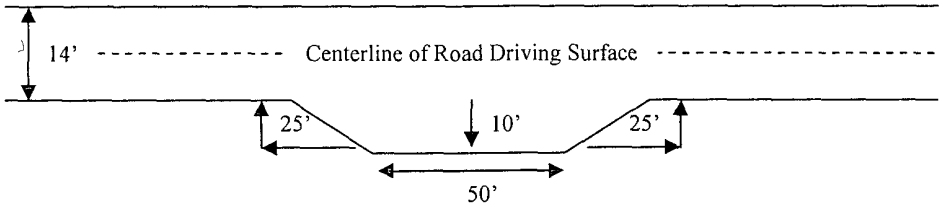
Ditching

Ditching shall be required on both sides of the road.

Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

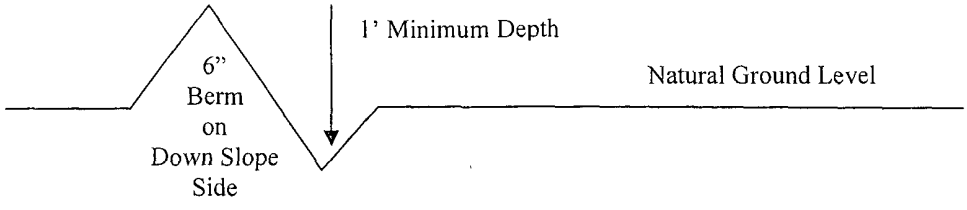


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

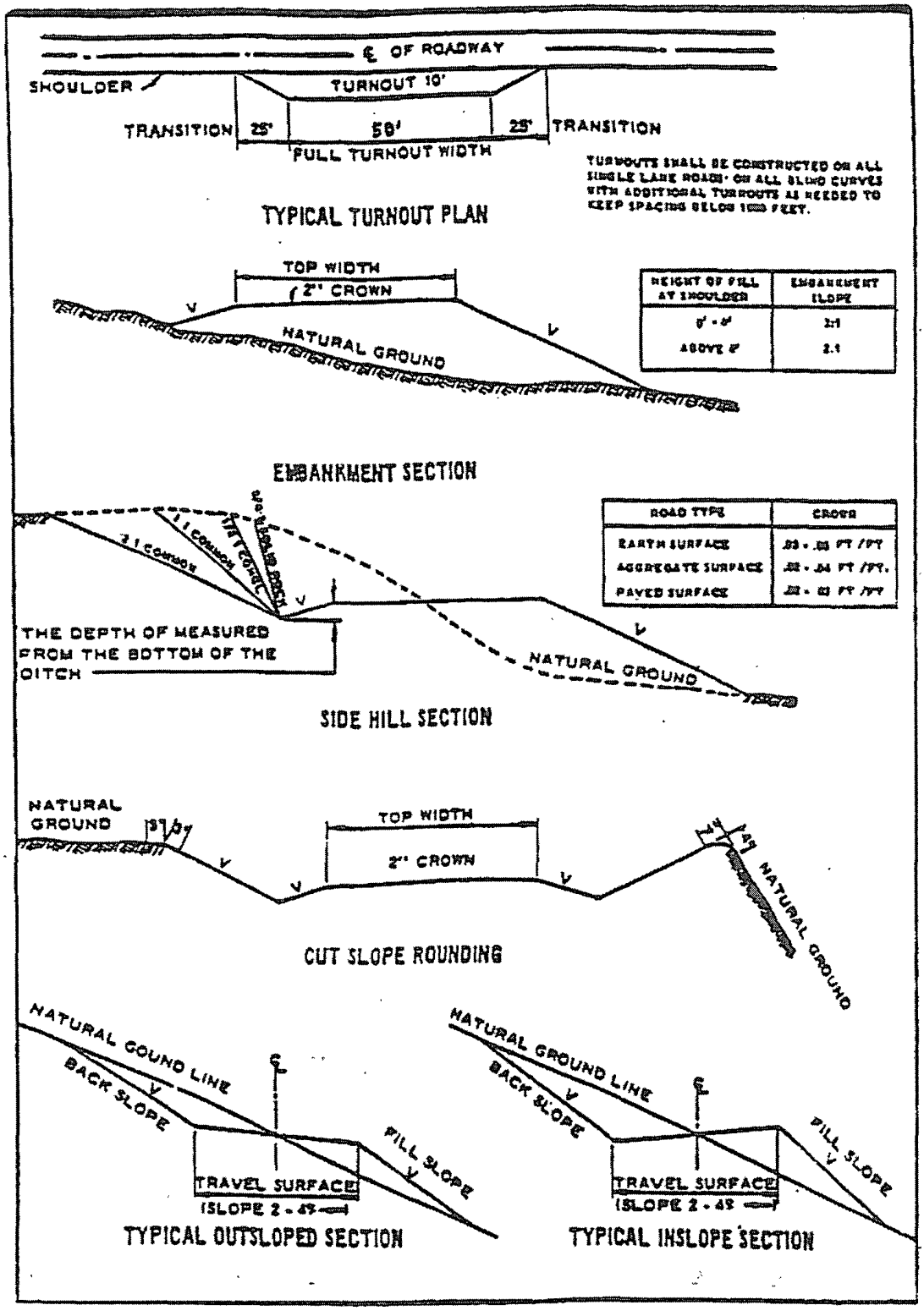
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Chaves and Roosevelt Counties, T16S Eddy County**
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
(575) 627-0205 and (575) 361-2822.

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a possible hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

1. The **13-3/8** inch surface casing shall be set **at approximately 340 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

   a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

   b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement). **Please provide WOC times to inspector for cement slurries.**

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, a remedial cement job will be done prior to drilling out that string.

Possible lost circulation in the Grayburg and San Andres formations.
Possible high pressure gas bursts from the Wolfcamp formation – applicable to pilot hole.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a-d above.
   Please provide WOC times to inspector for cement slurries.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

3. The minimum required fill of cement behind the **7** inch production casing is:

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

Formation below the kick off point to be tested according to Onshore Order 2.III.B.1.i.

Pilot hole will require a 180' plug at the bottom of hole and must be tagged.
If a CIBP is set, it must be set deep enough for the cement that is required; 35' if bailed, 25 sacks if pumped.

4. The minimum required fill of cement behind the **4-1/2** inch production casing is:

   ☒ Not required as operator is using Peak Iso-Pak liner. **Seal on Peak Systems Iso-Pack liner is to be tested per Onshore Oil and Gas Order 2.III.B.1.b. Please call BLM for witness of seal test.**

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. The tests shall be done by an independent service company.

    b. The results of the test shall be reported to the appropriate BLM office.

    c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

    d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

    e. A variance to test only the surface casing to the reduced pressure of **1000** psi with the rig pumps is approved. **The BOP will be tested to 5000 psi by an independent service company.**

WWI 031508

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES

C. ELECTRIC LINES

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The see mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

(Insert Seed Mixture Here)

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.