

CCD-ARTESIA

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. LC-060524
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Cimarex Energy Co. of Colorado		7. If Unit or CA Agreement, Name and No.
3a. Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701	3b. Phone No. (include area code) 432-571-7800	8. Lease Name and Well No. Vega 9 Federal No. 5
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 1035 FNL & 890 FWL At proposed prod. Zone		9. API Well No. 30-015- 30537
14. Distance in miles and direction from nearest town or post office*		10. Field and Pool, or Exploratory Loco Hills; Glorieta-Yeso / MR
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 890		11. Sec., T. R. M. or Blk. and Survey or Area 9-17S-30E
16. No of acres in lease 320	17. Spacing Unit dedicated to this well NWNW 40	12. County or Parish Eddy
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 563'	19. Proposed Depth 6000'	13. State NM
20. BLM/BIA Bond No. on File NM-2575	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3689' GR	22. Approximate date work will start* 02.28.11
23. Estimated duration 20-25 days	24. RECEIVED FEB 22 2011 NMOCD ARTESIA	

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 | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan | 5. Operator Certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Natalie Krueger</i>	Name (Printed/Typed) Natalie Krueger	Date 12.22.10
Title Regulatory		
Approved By (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date FEB 15 2011
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.

*(Instructions on page 2)

Roswell Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

Application to Drill
Vega 9 Federal No. 5
Cimarex Energy Co. of Colorado
Unit D, Section 9
T17S R30E, 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 1035 FNL & 890 FWL
- 2 Elevation above sea level: 3689' GR
- 3 Geologic name of surface formation: Quaternary 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: 6,000'
- 6 Estimated tops of geological markers:
San Andres 2869'
Glorieta 4319'
Paddock 4408'
Blinbry 4911'
Tubb 5786'
- 7 Possible mineral bearing formation:
Paddock Oil
Blinbry Oil

8 Proposed Mud Circulating System:

Depth			Mud Wt	Visc	Fluid Loss	Type Mud
0'	to	455'	8.4 - 8.8	40-45	NC	FW
455'	to	1300'	9.9 - 10.1	28-32	NC	Brine
1300'	to	6000'	9.1	28-32	NC	Cut Brine

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.

Application to Drill
Vega 9 Federal No. 5
Cimarex Energy Co. of Colorado
Unit D, Section 9
T17S R30E, Eddy County, NM

9 Casing Plan:

String	Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
Surface	16"	0'	to	455'	New	11¾"	42#	8-R	STC	H-40
Intermediate	11"	0'	to	1300'	New	8⅝"	24#	8-R	STC	J-55
Production	7⅞"	0'	to	6000'	New	5½"	17#	8-R	LTC	J-55

10 Cementing:

Surface

Lead: 200 sx Class C + 4% D-20 + 1% S + 0.125 ppg D-130 + 4.0 pps D-42 (wt 12.9 ppg, yield 1.99)

Tail: 200 sx Class C + 1% S-1 + D42 + 0.125 pps D130 (wt 14.80, yield 1.34)

TOC Surface

Intermediate

Lead: 200 sx 50:50 Poz: Class "C" + 0.2% Defoamer (D046) + 5% D044 (Salt) + 10% D020 (Extender Gel) + 1/8 pps Polyflake (D130) + 2 pps Gilsonite (D042) Mixed at 11.8 ppg, Yeild 2.57 cuft/sx, 15.061 gal/sx fresh water

Tail: 400 sx Class "C" + 1% S001 (CaCl2), Mixed at 14.8 ppg, 1.33 cuft/sx, 6.365 gal/sx fresh water

TOC Surface

Production

Lead: 500 sacks LiteCrete + 0.2% Defoamer (D046) + 0.6% Fluid Loss (D167) + 1 lb/sx Extender (D042) + 0.02% Retarder (D013) + 23 lbs/sx Silica (D178) + 40 lbs/sx Extender (D124) Mixed at 9.9 ppg. Yeild 2.35 cuft/sx, 8.6 gal/sx Fresh Water

Tail: 500 sacks PVL + 1.3% NaCl (D044) + 0.2% Fluid Loss (D167) + 0.2% Cement Retarder (D013) + 0.2% Dispersant (D065). Mixed at 13.0 ppg, Yeild 1.40 cuft/sx, 7.277 gal/sx Fresh Water

TOC 1100'

Fresh water zones will be protected by setting 11¾" casing at 455' and cementing to surface. Hydrocarbon zones will be protected by setting 8⅝" casing at 1300' and cementing to surface and by setting 5½" casing at 6000' and cementing to 1100.'

<u>Collapse Factor</u>	<u>Burst Factor</u>	<u>Tension Factor</u>
1.125	1.125	1.6

Application to Drill
Vega 9 Federal No. 5
Cimarex Energy Co. of Colorado
Unit D, Section 9
T17S R30E, Eddy County, NM

11 Pressure control Equipment:

Exhibit "E-1" - An 11½" 3000 PSI working pressure B.O.P. consisting of a one set of blind rams and one set of pipe rams and a 3000 psi annular-type preventor. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. 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. Test BOP equipment and choke manifold to 250 psi low and 3000 psi high and annular BOP to 250 psi low and 1500 psi high by an independent service company.

BOP unit will be hydraulically operated. Below intermediate casing shoe, BOP 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 3000 psi BOP system.

*
See COA
12 Testing, Logging and Coring Program:

- A. Mud logging No mud logging program.
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DSTs or cores are planned at this time.

*
See COA
13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potential 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 **2300 psi** Estimated BHT **110°**

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take 10-15 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.

Blinebry pay will be perforated and stimulated.

The proposed well will be tested and potential as an oil well.

Silver Oak #3

SEE COA's

Flare Line

Frac Tank Farm

Topsoil Stockpile

Mud Gas Separator

Steel Pits

Mud Tanks

5'x5'x5' Cellar

Dog House

Choke Manifold

Pipe Racks

Catwalk

Pipe Lay Down Area

Trailer

Trailer

Access Road

1"=50'

N

Exhibit D – Rig Diagram

Vega 9 Federal No. 5

Cimarex Energy Co. of Colorado

9-17S-30E

1035 FNL & 890 FWL

Eddy County, NM

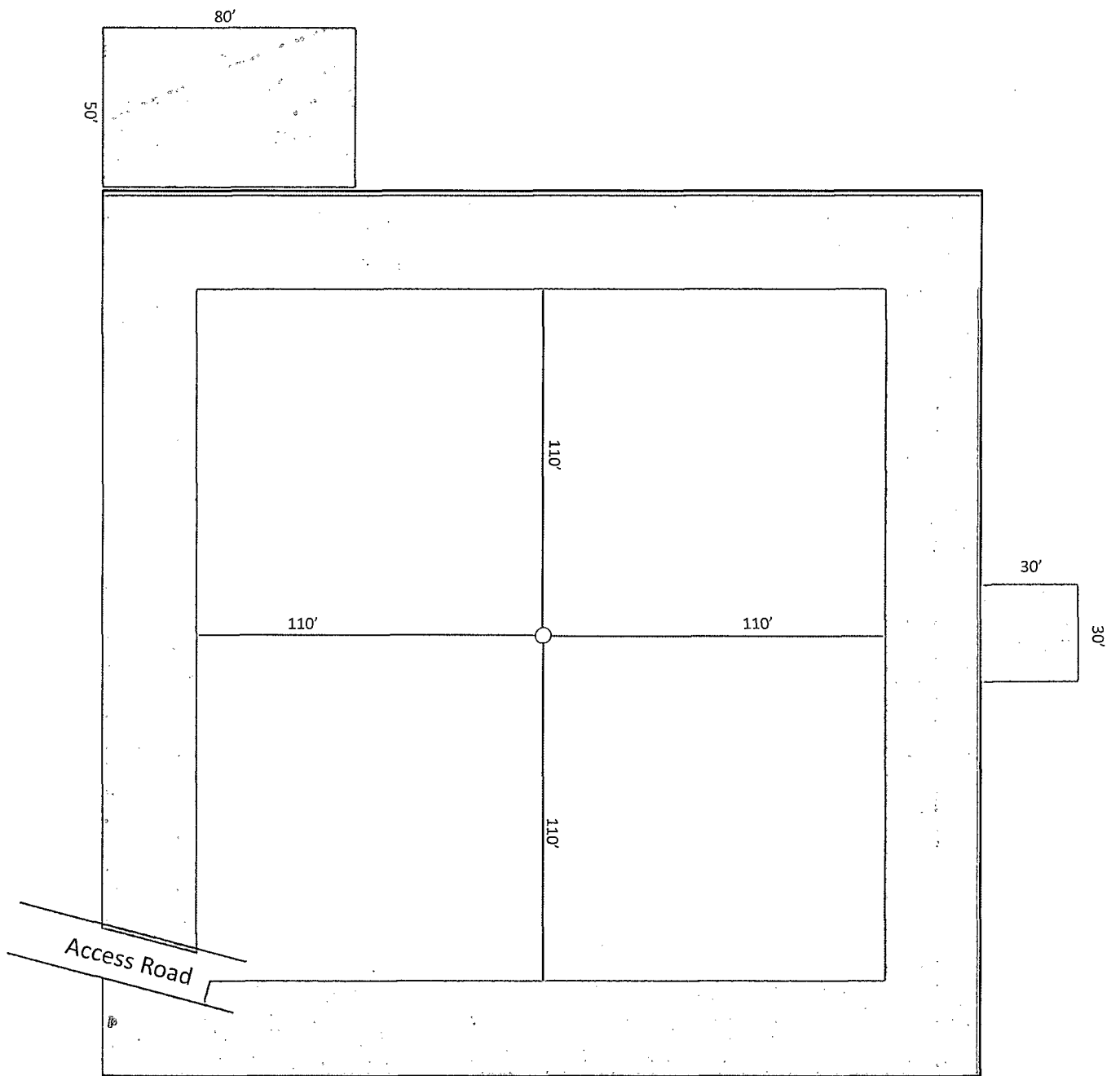
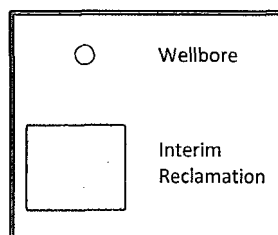


Exhibit D-1
Vega 9 Federal No. 5
Cimarex Energy Co. of Colorado
9-17S-30E
1035 FNL & 890 FWL
Eddy County, NM



1"=50'

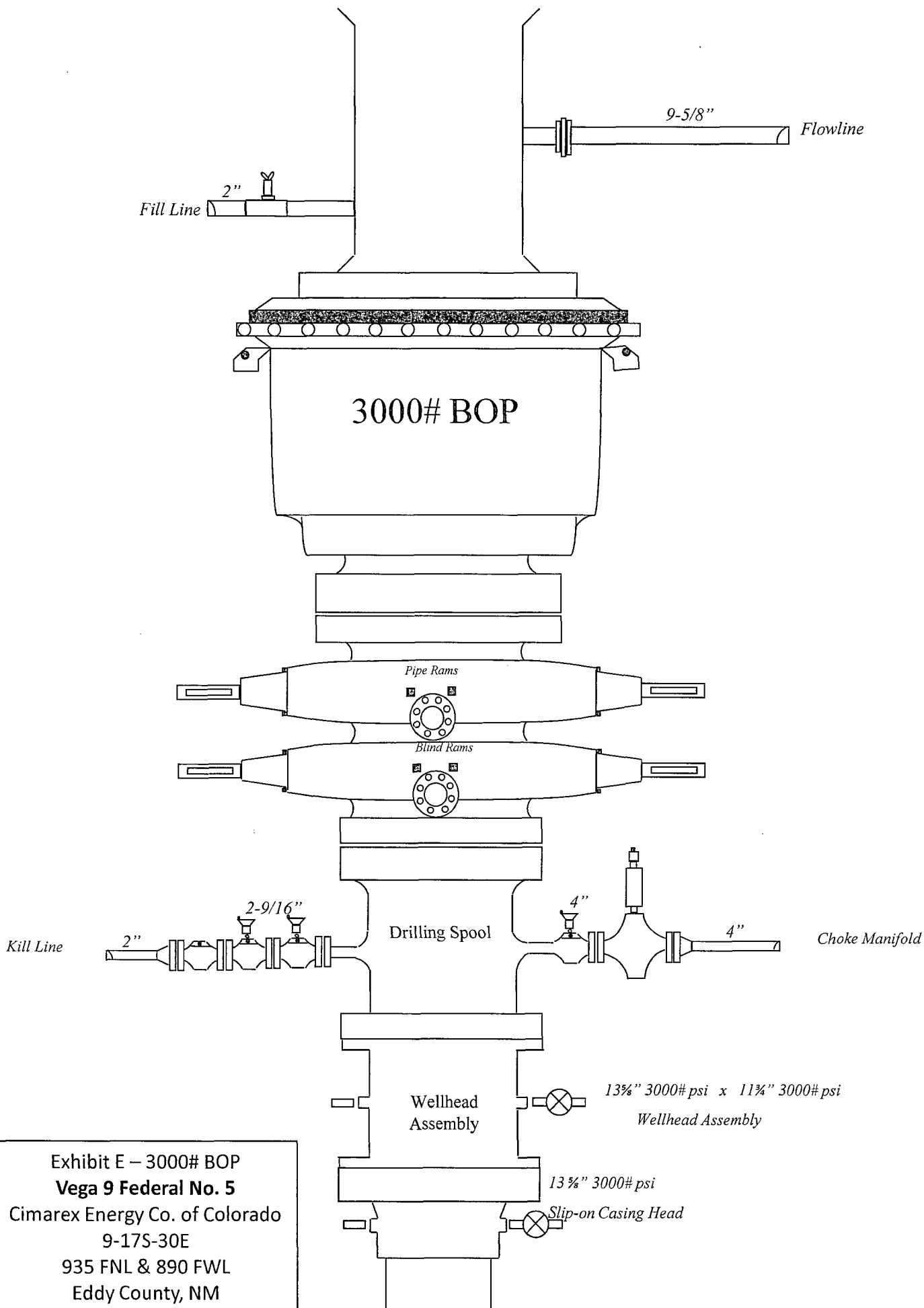


Exhibit E – 3000# BOP
Vega 9 Federal No. 5
 Cimarex Energy Co. of Colorado
 9-17S-30E
 935 FNL & 890 FWL
 Eddy County, NM

Drilling Operations

Choke Manifold

3M Service

Exhibit E-1 – Choke Manifold Diagram
Vega 9 Federal No. 5
Cimarex Energy Co. of Colorado
9-17S-30E
935 FNL & 890 FWL
Eddy County, NM

