

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED  
OMB No. 1004-0135  
Expires July 31, 1996



**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well  
 Oil Well     Gas Well     Other  
JUN 05 2008

2. Name of Operator  
 Cimarex Energy Co. of Colorado    **OCD-ARTESIA**

3a. Address  
 PO Box 140907; Irving, TX 75014-0907

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

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
 1980' FSL & 660' FEL  
 14-22S-22E

5. Lease Serial No.  
 NMNM119724

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
 Arroyo Vista 14 Federal No. 1

9. API Well No  
 30-015- 36 349

10. Field and Pool, or Exploratory Area  
 Indian Basin; Morrow, SW (Gas)

11. County or Parish, State  
 Eddy County, NM

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, included estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Due to possible severe lost circulation, Cimarex proposes to drill its surface and intermediate holes with an air mist/fresh water spud mud system with fresh water pit using **United Rig 41**. After setting surface and intermediate casing, 9 5/8" SOW x 11" 3000# wellhead will be installed and United Rig 41 will rig down and move off. **Patterson Rig 80** will MIRU, drill to TD, and set production casing with a closed-loop system as originally permitted. Revised Rig Diagrams are attached.

Attached are the following revisions:

1. Revised Mud Circulating System
2. Revised BOP Equipment Description and Diagram
3. Revised Pit System and Well Site Layouts with Rig Diagram Plats for Air Mist drilling and for Closed-Loop drilling

All other aspects of drilling operations remain same as permitted.

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct  
 Name (Printed/Typed)

Natalie Krueger  
 Signature

Title  
 Regulatory Analyst  
 Date  
 May 27, 2008

Approved by

Conditions of Approval, if any, are attached. Applicant certifies that the applicant holds legal or equitable title which would entitle the applicant to conduct operations under Title 18 U.S.C. Section 1001, makes it a crime for fraudulent statements or representations as to any

**NOTE:** New Pit Rule  
 NMAC 19-15-17

<b>APPROVED</b>	
Date <b>JUN 3 2008</b>	
WESLEY W. INGRAM PETROLEUM ENGINEER	

agent or agency of the United States any false, fictitious or

(Instructions on reverse)

**Accepted for record - NMOCD**

Change of Plans  
**Arroyo Vista 14 Federal No. 1**  
Cimarex Energy Co. of Colorado  
Unit I, Section 14  
T22S R22E; Eddy County, NM

Location: SHL 1980' FSL & 660' FEL  
BHL 1980' FNL & 330' FEL

Proposed Mud Circulating System:

Depth		Mud Wt	Visc	Fluid Loss	Type Mud
0'	to 300'	4.0 - 8.4	28-36	NC	Fresh water/air mist
300'	to 2210'	4.0 - 8.4	28-29	<10	Fresh water/air mist
2210'	to 9950'	8.4 - 9.0	28-46	<10	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. 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.

Change of Plans  
**Arroyo Vista 14 Federal No. 1**  
Cimarex Energy Co. of Colorado  
Unit I, Section 14  
T22S R22E; Eddy County, NM

Pressure control Equipment:

Exhibit "E-1" - Surface & Intermediate Casing - An 13 $\frac{3}{8}$ " 3000 PSI minimum working pressure B.O.P. consisting of a 5000# annular type preventer with rotating head. 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. Annular preventor to be function-tested once per day. Annular preventor will be tested to 250 psi low and 2500 psi high, by an independent service company.

Exhibit "E-2" - Production Casing - A 9 $\frac{5}{8}$ " 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000# hydril. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 2210'. 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. Ram-type BOP to be tested to 250 psi low and 2500 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.

We are requesting a variance for testing the 13 $\frac{3}{8}$ " 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 $\frac{3}{8}$ " casing to 1000 psi using rig pumps. The BOP will be tested to 5000 PSI by an independent service company.

Revised Pit System and Well Site Layout

**Arroyo Vista 14 Federal No. 1**

Cimarex Energy Co. of Colorado

Unit I, Section 14

T22S R22E; Eddy County, NM

**Air Mist (Surface and Intermediate Holes)**

Methods of Handling Waste Material:

- A. Drill cuttings will be disposed of in the 100' X 50' fresh water pit (Exhibit A).
- B. Drilling fluids will be contained in the fresh water pit. Fresh water produced during drilling will be circulated into and contained in the pit or steel tanks if volumes become excessive.
- C. Remaining drilling fluids will be allowed to evaporate in the fresh water pit until the pit is dry enough for breaking out. In the event that drilling fluids do not evaporate in a reasonable time they will be hauled off by transports and be disposed of at a state approved disposal facility. Later pits will be broken out to speed drying. Water produced during testing will be put in reserve pits. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

Well Site Layout:

- A. These exhibits indicate proposed location of the 100' X 50' fresh water pit.
- B. Mud pits in the active circulating systems will be steel pits and the fresh water pit will be lined with a 12 mil liner.
- C. The fresh water pit will be fenced on three sides with four strands of barbed wire during drilling phases. The fourth side will be fenced after all drilling operations have ceased.

**Closed System (Production Hole)**

Methods of Handling Waste Material:

- A. Drill cuttings will be separated by a series of solids removal equipment and stored in steel containment pits and then hauled to a state-approved disposal facility or buried.
- B. Drilling fluids will be contained in steel pits in a closed circulating system. Fluids will be cleaned and reused. Water produced during testing will be contained in the steel pits and disposed of at a state approved disposal facility. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

Well Site Layout:

- A. These exhibits indicate proposed location of the 70' X 15' steel storage and haul-off bins (Exhibit B).
- B. Mud pits in the closed circulating systems will be steel pits. Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility or buried.

If the well is a producer, those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

# United Rig 41

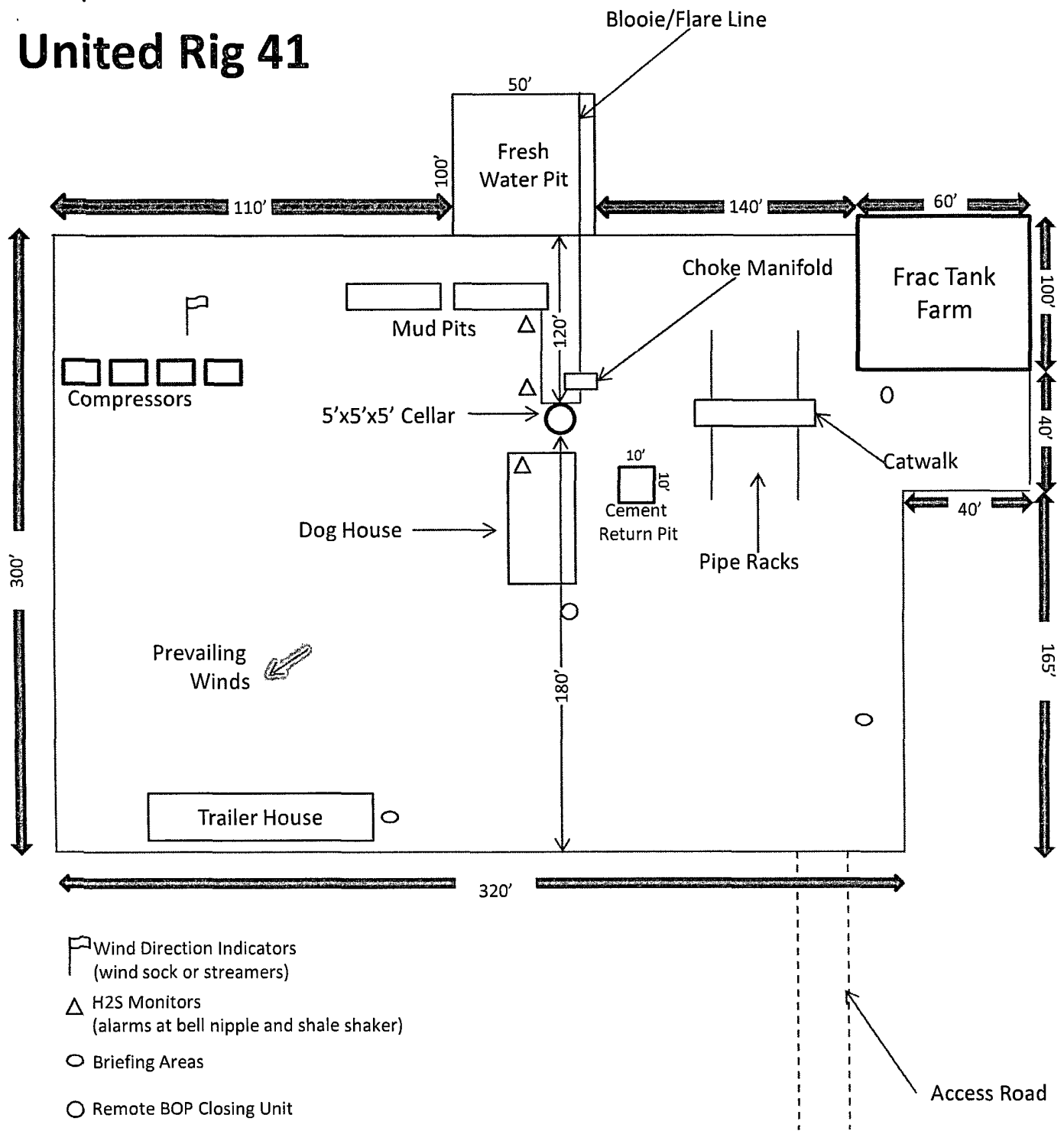
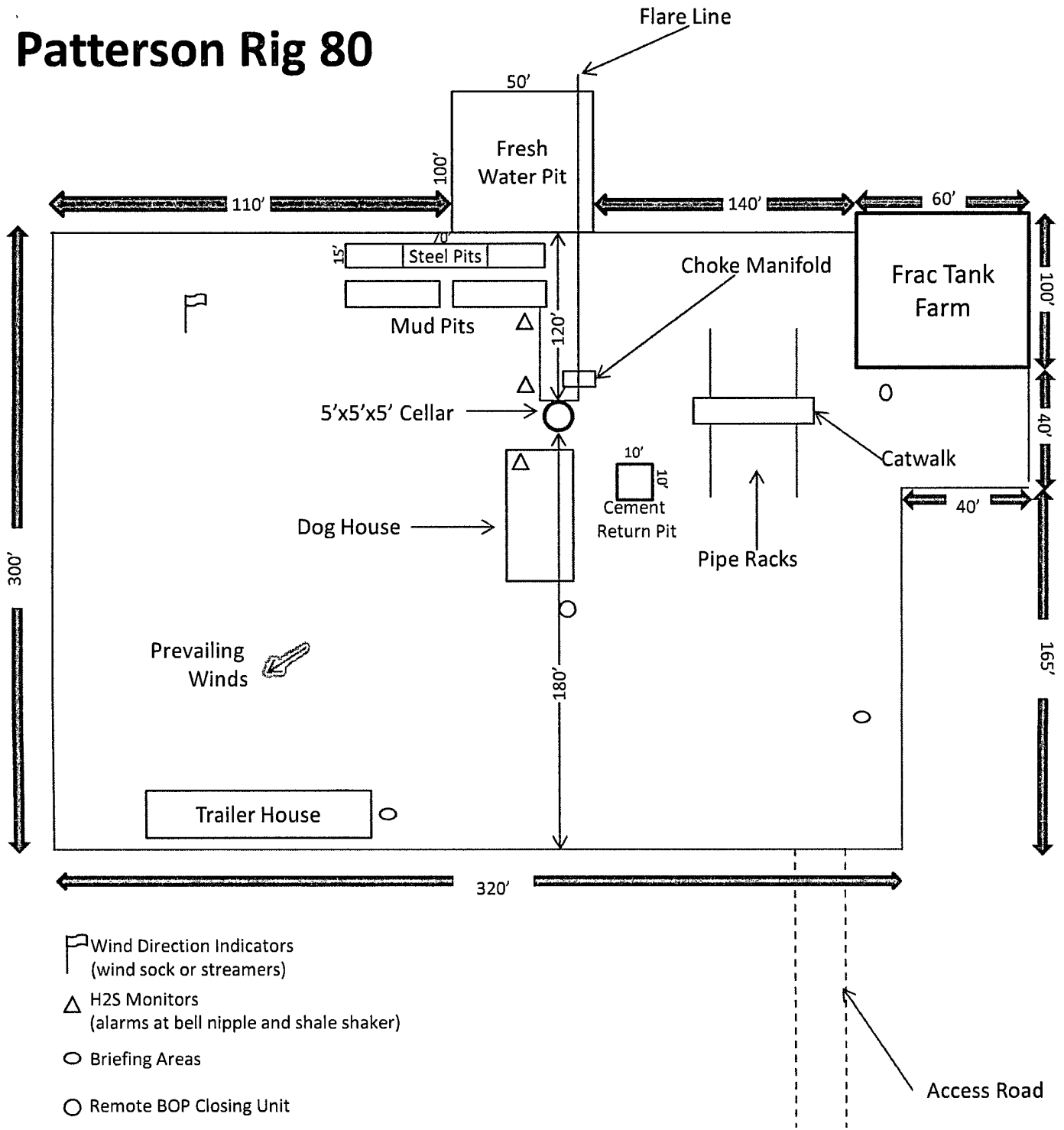


Exhibit A  
 REVISED Rig Layout Diagram  
 Surface & Intermediate Casing  
**Arroyo Vista 14 Federal No. 1**  
 Cimarex Energy Co. of Colorado  
 14-22S-22E  
 1980' FSL & 660' FEL  
 Eddy County, NM

# Patterson Rig 80



**Exhibit B**  
 REVISED Rig Layout Diagram  
 Production Casing  
**Arroyo Vista 14 Federal No. 1**  
 Cimarex Energy Co. of Colorado  
 14-22S-22E  
 1980' FSL & 660' FEL  
 Eddy County, NM

**REVISED**

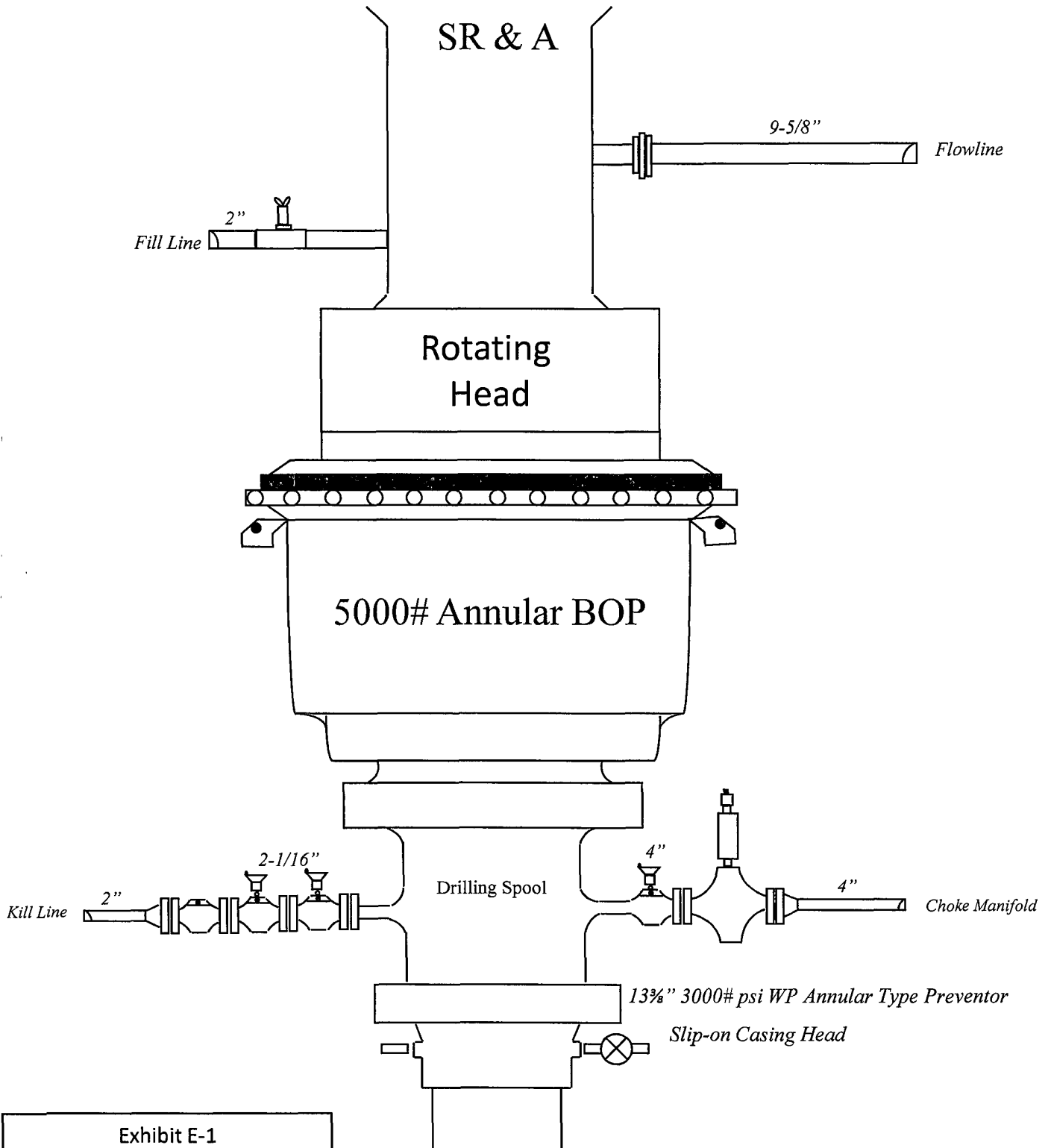


Exhibit E-1  
REVISED BOP  
**Arroyo Vista 14 Federal No. 1**  
Cimarex Energy Co. of Colorado  
14-22S-22E  
1980' FSL & 660' FEL  
Eddy County, NM

**REVISED**

SR & A

9-5/8"

Flowline

Fill Line

2"

Rotating Head

5000# BOP

Pipe Rams

Blind Rams

Drilling Spool

4"

4"

Choke Manifold

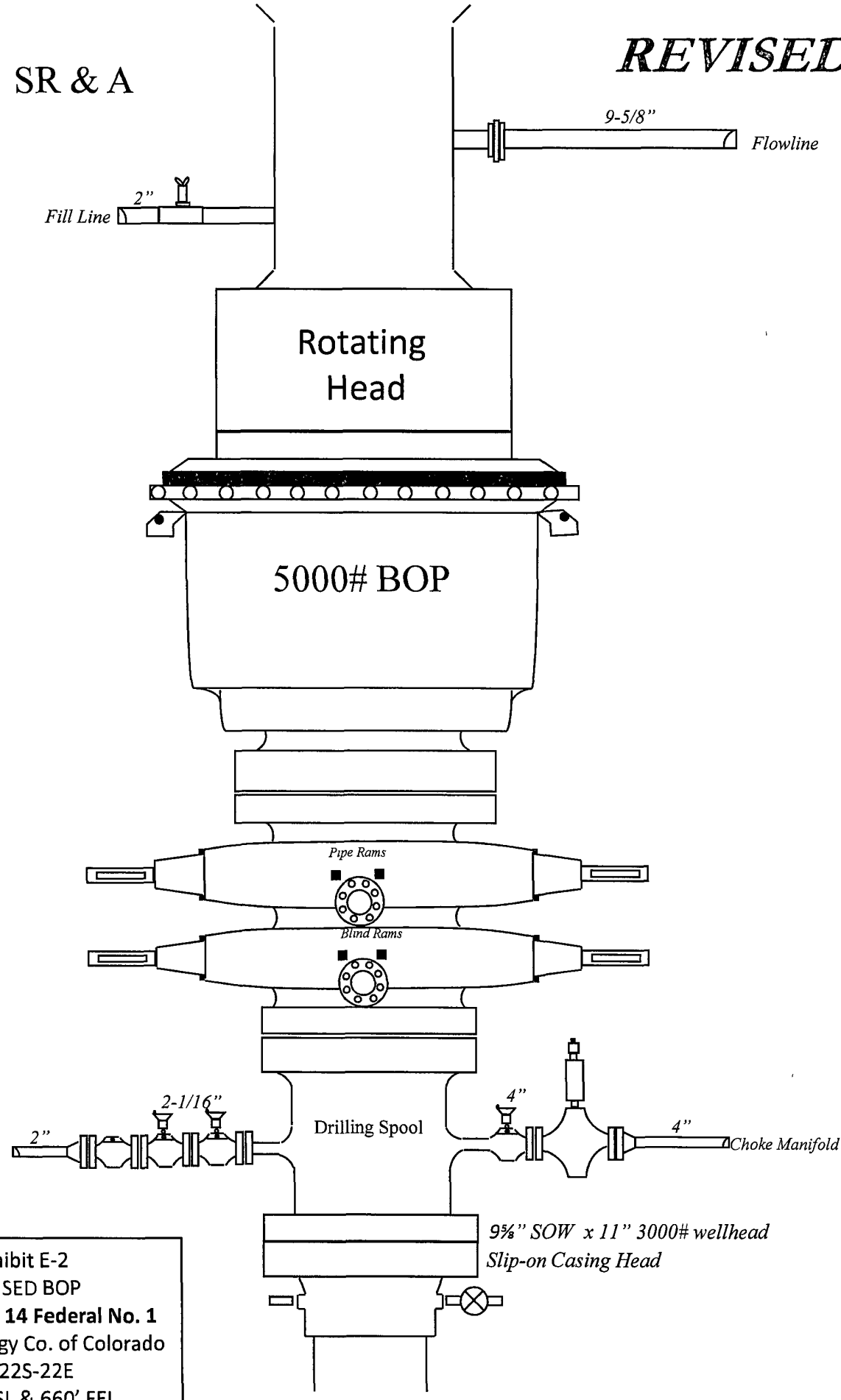
Kill Line

2"

2-1/16"

9 5/8" SOW x 11" 3000# wellhead  
Slip-on Casing Head

Exhibit E-2  
REVISED BOP  
Arroyo Vista 14 Federal No. 1  
Cimarex Energy Co. of Colorado  
14-22S-22E  
1980' FSL & 660' FEL  
Eddy County, NM





**PECOS DISTRICT  
CONDITIONS OF APPROVAL**

**UNITED RIG 41/PATTERSON RIG 40**

<b>OPERATOR'S NAME:</b>	Cimarex Energy Co. of Colorado
<b>LEASE NO.:</b>	NMNM 119724
<b>WELL NAME &amp; NO.:</b>	Arroyo Vista 14 Fed 1
<b>SURFACE HOLE</b>	1980' FSL & 0660' FEL
<b>FOOTAGE:</b>	
<b>BOTTOM HOLE FOOTAGE</b>	' F L & ' F L
<b>LOCATION:</b>	Section 14, T. 22 S., R 22 E., NMPM
<b>COUNTY:</b>	Eddy County, New Mexico

**I. 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

**Eddy County**

**Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822**

1. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated 500 feet prior to drilling into the Canyon formation. **Hydrogen Sulfide has been reported in this section measuring 8000 ppm in gas streams. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
2. **The United Rig 41 can be removed from the well after securing the well once the intermediate casing is set. Well to be monitored daily until Patterson Rig 40 is moved onto location to complete the drilling of the production hole. A maximum of 90 days is approved from the departure of United Rig 41 until the arrival of Patterson Rig 40.**
3. **For Patterson Rig 40:** 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.

4. 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**

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM-engineer.**

**High cave/karst.**

**Possible lost circulation in the San Andres, Wolfcamp, and Strawn formations.**

**Possible high pressure in the Wolfcamp and Pennsylvanian section.**

1. The 13-3/8-inch surface casing shall be set at **approximately 300** feet and cemented to the surface.
  - 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).
  - 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, remedial cementing will be done prior to drilling out that string.

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.

**If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.**

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

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

4. 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. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

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

**D. DRILLING MUD**

**Aerated mud approved for the drilling of the surface and intermediate hole, air drilling is not approved.**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

**WWI-060308**