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ATS-12-756

Form 3160-3
(April 2004)FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work: <input type="checkbox"/> DRILL <input checked="" type="checkbox"/> REENTER		5. Lease Serial No. Nm 119724
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.		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 Arroyo Vista 14 Federal #1
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 1980 FSL & 660 FEL At proposed prod Zone 1980 FSL & 660 FEL		9. API Well No 30-015-36340
14. Distance in miles and direction from nearest town or post office*		10. Field and Pool, or Exploratory Yes, Wildcat
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line if any) 660'		11. Sec., T R. M. or Blk. and Survey or Area 14-22S-22E
16 No of acres in lease 320	17. Spacing Unit dedicated to this well E2E2 40	12. County or Parish Eddy
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 0'	19 Proposed Depth MD 3100 TVD 3100	13 State NM
20 BLM/BIA Bond No on File COB000011		
21. Elevations (Show whether DF, KDB, RT, GL, etc) 4381' GR	22. Approximate date work will start* 6.15.12	23 Estimated duration 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 | 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>Zeno Farris</i>	Name (Printed/Typed) Zeno Farris	Date 05.03.12
----------------------------------	-------------------------------------	------------------

Title

Manager Operations Administration

Approved By (Signature) <i>/s/ Don Peterson</i>	Name (Printed/Typed) <i>/s/ Don Peterson</i>	Date AUG - 8 2012
Title <i>Field Manager</i>	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.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction

* (Instructions on page 2)

Roswell Controlled Water Basin

MDade 8/29/12
 Accepted for record
 NMOCD

Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

Operator Certification Statement

Arroyo Visa 14 Federal #1

Cimarex Energy Co.

Unit I, Section 14

T22S-R22E; Eddy County, NM

Operator's Representative

Cimarex Energy Co. of Colorado

600 N. Marienfeld St., Ste. 600

Midland, TX 79701

Office Phone: (432) 571-7800

Zeno Farris

CERTIFICATION: I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 3rd day of May, 2012

NAME: Zeno Farris
Zeno Farris

TITLE: Manager Operations Administration

ADDRESS: 600 N. Marienfeld St., Ste. 600
Midland, TX 79701

TELEPHONE: (432) 620-1938

EMAIL: zfarris@cimarex.com

Field Representative: Same as above

DISTRICT I
1625 N. Franklin Dr., Hobbs, NM 88240

DISTRICT II
1301 V. 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

Form C-102
Revised October 12, 2005

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-36340	Pool Code 97972	Pool Name WC; 015 6-01 S2222 14 I; 1/850 Wildcat, Yeso
Property Code 37174	Property Name ARROYO VISTA "14" FEDERAL	
OGRID No. 215099	Operator Name CIMAREX ENERGY CO.	Well Number 1
		Elevation 4381'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	14	22 S	22 E		1980	SOUTH	660	EAST	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
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						
							3100	8/8	

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

	<p align="center">NM-119724</p>		<p>OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>Zeno Farris</i> 05/03/2012 Signature Date</p> <p align="center">Zeno Farris Printed Name</p>
	<p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p align="center">FEBRUARY 18, 2008</p> <p>Date Surveyed</p> <p><i>Gary L. Jones</i> Signature of Professional Surveyor</p> <p align="center"></p>		<p>Certificate No. Gary L. Jones 7977</p>
	<p align="center">BASIN SURVEYS</p>		

Drilling Plan
Arroyo Visa 14 Federal #1
Cimarex Energy Co.
Unit I, Section 14
T22S-R22E; 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 1980 FSL & 660 FEL
- 2 **Elevation above sea level:** 4381 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:** MD 3100 TVD 3100
- 6 **Estimated tops of geological markers:**

Grayburg	291
San Andres	564
Glorieta	2212
Yeso	2260
- 7 **Possible mineral bearing formations:**

Glorieta	Oil
Yeso	Oil

8 **Proposed Mud Circulating System:**

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' 2236	8.4-8.6	28	NC	FW
2236' to 3100'	8.5-9.0	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.

Proposed Drilling Plan

Cut off PA marker weld on 9 5/8" casing stub, NUBOP and test. Drill out cement plugs @ 0-400', 1825-2299'. Surface & intermediate csg previously set, drill & clean out to a depth of 3100'. Run 5-1/2", 17# P110, LTC csg from 0-3100' and cement to surface. Please see attached current and proposed wellbore diagram.

Drilling Plan
Arroyo Visa 14 Federal #1
 Cimarex Energy Co.
 Unit I, Section 14
 T22S-R22E; Eddy County, NM

9 Casing & Cementing Program:

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface	17 1/2"	0' to 323'	New 13 3/8"	48#	STC	H-40
Intermediate	12 1/4"	0' to 2236'	New 9 5/8"	40#	LTC	J-55
Production	7 7/8"	0' to 3100'	New 5 1/2"	17#	LTC	L-80

* casing previously set

10 Cementing:

Surface Previously set casing & cement: Lead: 100 sx Prem Plus + additives Wt 14.2 ppg, Yld 1.59 cf/sx Tail: 340 sx Perm Plus + additives Wt 14.8 ppg, Yld 1.34 cf/sx
TOC Circ 62 sx Sur Centralizers per Onshorder 2.III.B.1.f

Intermediate Previously set casing & cement: Lead 450 sx Interfill C + additives Wt 11.9 ppg, Yld 2.46 cf/sx Tail: 250 sx Prem Plus + additives Wt 14.8 ppg, Yld 1.33 cf/sx
TOC Circ 85 sx Sur

Production Lead: 300SKS 35:65 Poz C + 5% salt + 6% Gel. 12.6ppg 2.04 yield
 Tail: 300SKS PVL + 1.3% salt + 5% expanding agent 13.0ppg 1.47 yield 50% Excess

TOC Surface

Depth to ground water is 200' according to the State Engineer. Fresh water zones are protected by existing 13 3/8" casing at 323' and cement surface and existing 9 5/8" casing set at 2236' and cement to surface. Hydrocarbon zones will be protected by setting 5 1/2" casing at 3100 cementing to surface.

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

11 Pressure control Equipment:

Exhibit "E". A 13 3/8" 5000 PSI working pressure BOP system tested to 3000 PSI consisting of one set of blind rams and one set of rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating station; auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill s safety valve in the open position will be available on the rig floor. Mud gas will be installed prior to drilling out surface plug on 9 casing.

BOP unit will be hydraulically operated. BOP will be nipped up and operated at least once a day while drilling and the blind ram be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the drill o surface plug on 9 5/8" casing through the running of production casing, the well will be equipped with a 5000 psi BOP system test 3000 PSI.

Before drilling out of the surface plug on the 9 5/8" casing BOPS will be tested by an independent service company to 250 psi low 3000 psi high. Hydril will be tested to 250 psi low and 1500 psi high.

Drilling Plan
Arroyo Visa 14 Federal #1
Cimarex Energy Co.
Unit I, Section 14
T22S-R22E; Eddy County, NM

12 Testing, Logging and Coring Program:

- A. Mud logging program: 1 man unit from 2236' to TD
- B. Electric logging program: None planned Logs previously ran.
- C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H₂S from the surface to the Yeso formation to meet the BLM's minimum requirements for the submission of an "H₂S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H₂S Safety package on all wells, attached is an "H₂S Drilling Operations Plan." 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 **1386 psi** Estimated BHT **135°**

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.

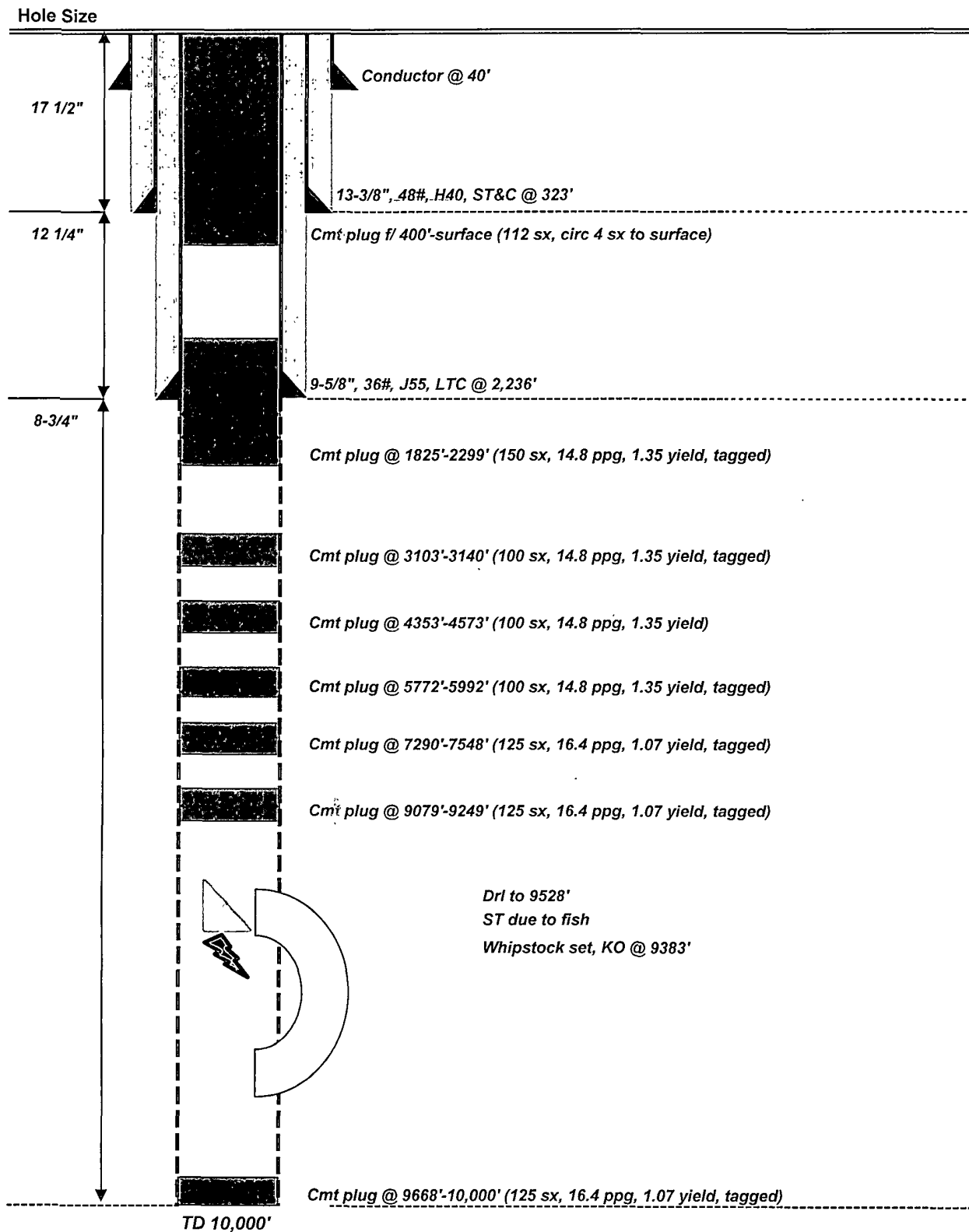
Yeso pay will be perforated and stimulated.

The proposed well will be tested and potentialed as **an oil well.**



Current Schematic - 5/1/2012

Well: Arroyo Vista 14 Fed #1
Location: Sec 14-22S-22E
County, State: Eddy County, NM
Surface Location: 1980 FSL, 660 FWL

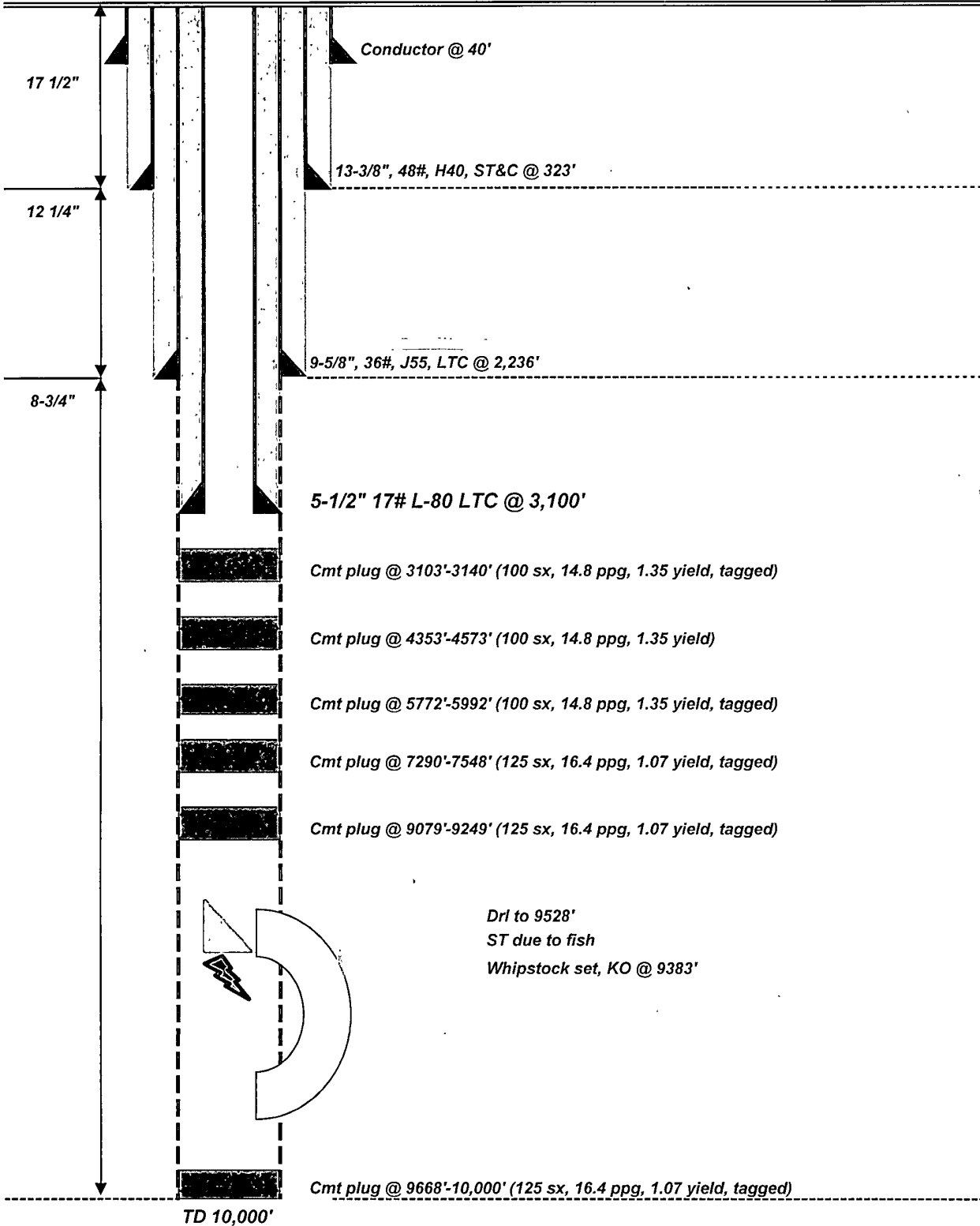




Proposed Wellbore Schematic

Well: Arroyo Vista 14 Fed #1
Location: Sec 14-22S-22E
County, State: Eddy County, NM
Surface Location: 1980 FSL, 660 FWL

Hole Size



SR & A

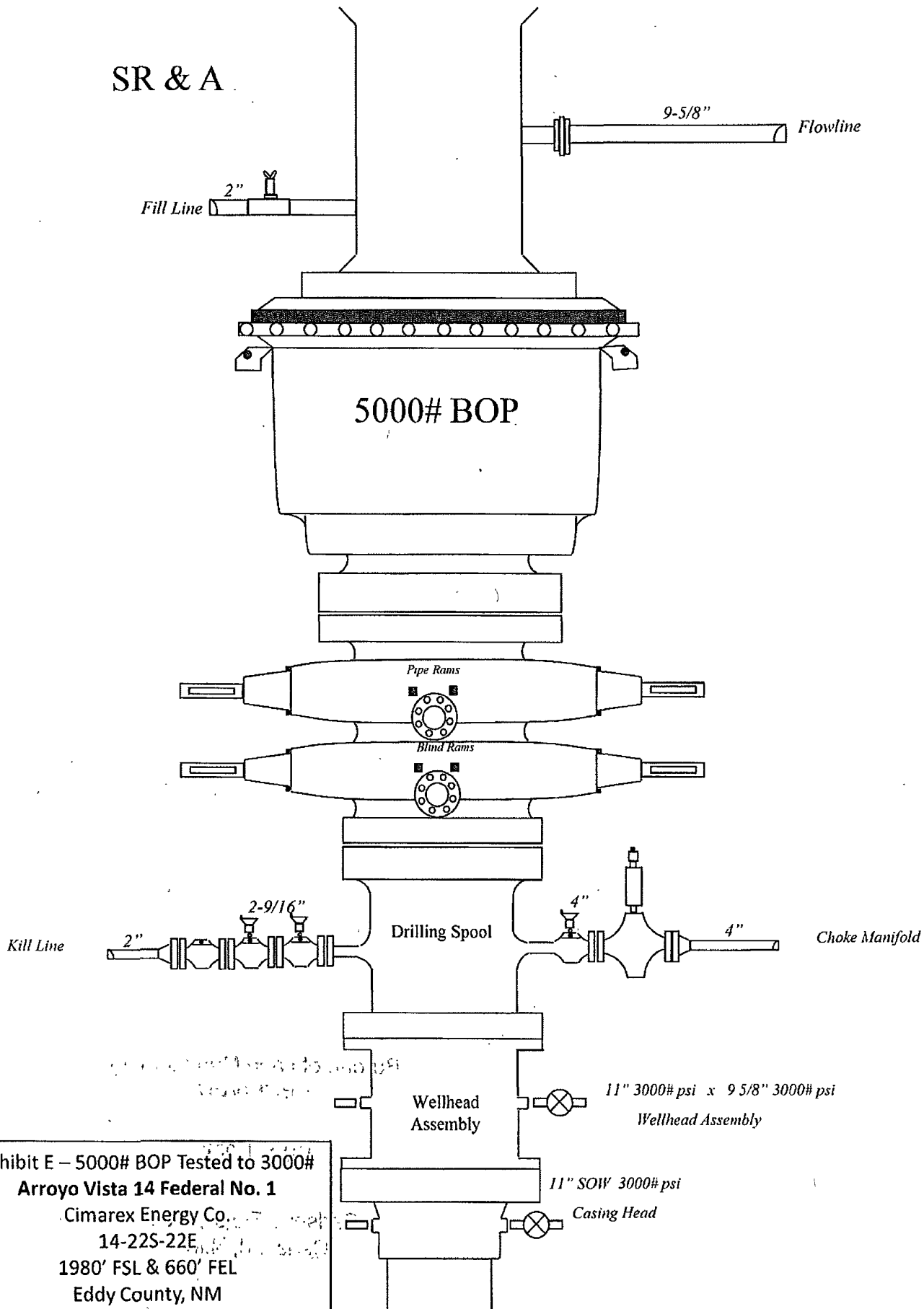
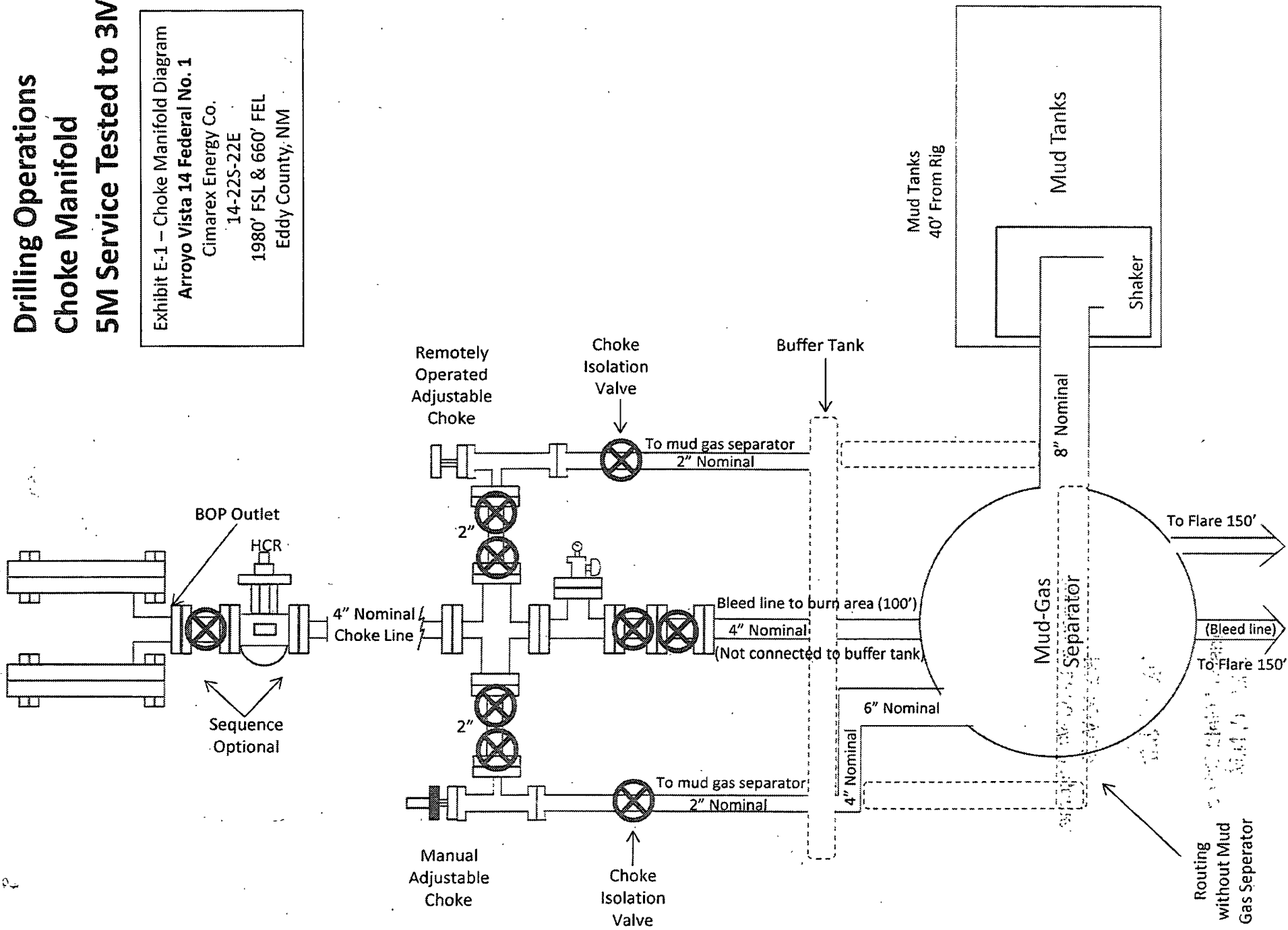


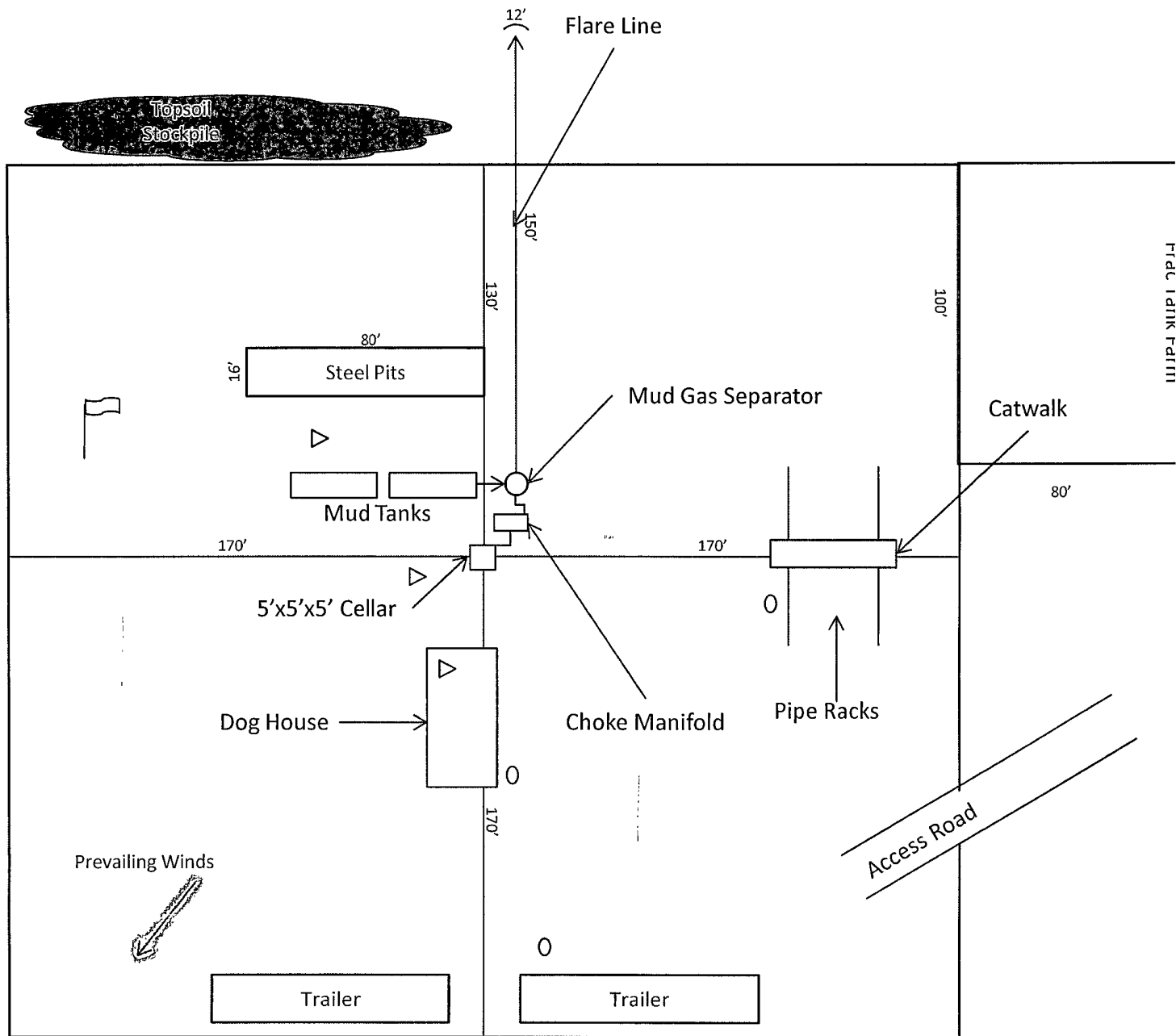
Exhibit E – 5000# BOP Tested to 3000#
Arroyo Vista 14 Federal No. 1
Cimarex Energy Co.
14-22S-22E
1980' FSL & 660' FEL
Eddy County, NM

Drilling Operations Choke Manifold 5M Service Tested to 3M

Exhibit E-1 – Choke Manifold Diagram
Arroyo Vista 14 Federal No. 1
Cimarex Energy Co.
14-2225-22E
1980' FSL & 660' FEL
Eddy County, NM



Silver Oak 3



1"=50'



Wind Direction Indicators
(wind sock or streamers)



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



Briefing areas

Exhibit D – Rig Diagram
Arroyo Vista 14 Federal No. 1
 Cimarex Energy Co.
 14-22S-22E
 1980' FSL & 660' FEL
 Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan

Arroyo Visa 14 Federal #1

Cimarex Energy Co.

Unit I, Section 14

T22S-R22E; 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 separator will be brought into service along with H₂S scavengers if necessary.

H₂S Contingency Plan
Arroyo Visa 14 Federal #1
Cimarex Energy Co.
Unit I, Section 14
T22S-R22E; Eddy County, NM

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must:

- ★ Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- ★ Evacuate any public places encompassed by the 100 ppm ROE.
- ★ Be equipped with H₂S monitors and air packs in order to control the release.
- ★ Use the "buddy system" to ensure no injuries occur during the response.
- ★ Take precautions to avoid personal injury during this operation.
- ★ Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- ★ Have received training in the:
 - ♦ Detection of H₂S, and
 - ♦ Measures for protection against the gas,
 - ♦ Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H₂S Contingency Plan Emergency Contacts

Arroyo Visa 14 Federal #1

Cimarex Energy Co.

Unit I, Section 14

T22S-R22E; Eddy County, NM

Company Office

Cimarex Energy Co. of Colorado	800-969-4789
Co. Office and After-Hours Menu	

Key Personnel

Name	Title	Office	Mobile
Doug Park	Drilling Manager	432-620-1934	972-333-1407
Scott Lucas	Field Drilling Super		432-894-5572
Jeff Lajoie	Field Drilling Super		432-257-9889
Roy Shirley	Field Super		432-634-2136

Artesia

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

Santa Fe

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

National

National Emergency Response Center (Washington, D.C.)	800-424-8802
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Medical

Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

Other

Boots & Coots IWC	800-256-9688	or	281-931-8884
Cudd Pressure Control	432-699-0139	or	432-563-3356
Halliburton	575-746-2757		
B.J. Services	575-746-3569		

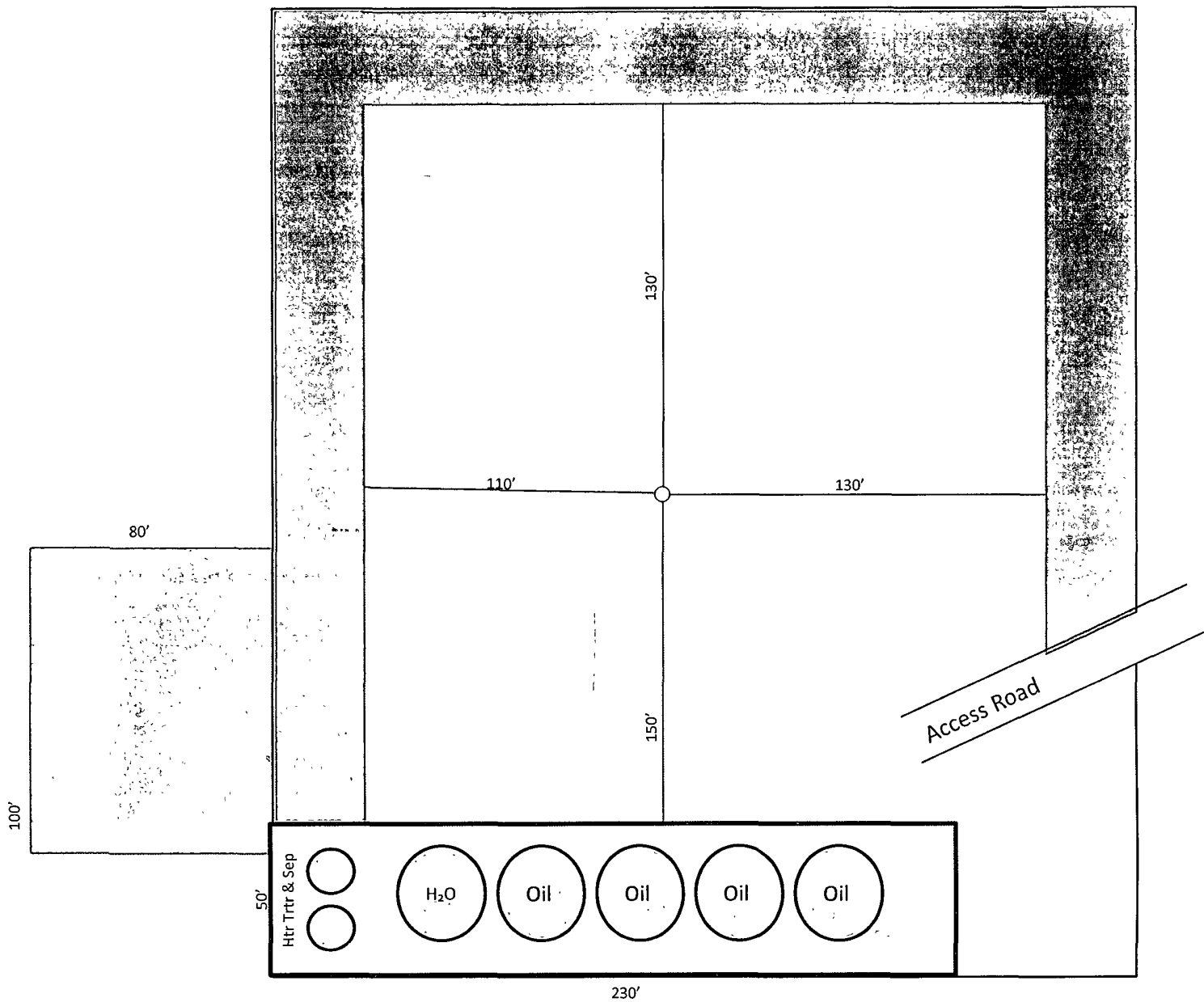
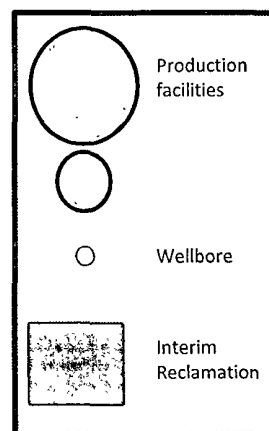
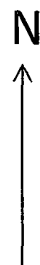


Exhibit D-1
 Production Facilities Layout Diagram
Arroyo Vista 14 Federal No. 1
 Cimarex Energy Co.
 14-22S-22E
 1980' FSL & 660' FEL
 Eddy County, NM

1"=50'



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy Co
LEASE NO.:	NM119724
WELL NAME & NO.:	1 Arroyo Vista 14 Federal
SURFACE HOLE FOOTAGE:	1980' FSL & 660' FEL
BOTTOM HOLE FOOTAGE:	' FL & ' FL
LOCATION:	Section14 , T.22 S., R.22 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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Access road
 - Cave/Karst
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - High Cave/Karst
 - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**