

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

2005 AUG 10 AM 11 57

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

Ia. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. 1-149-IND-7971
Ib. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian Allottee or Tribe Name Navajo Allottee Land - Allotment No. 11537
2. Name of Operator ConocoPhillips Company		7. If Unit or CA Agreement, Name and No
3a. Address 4001 Penbrook, Odessa, TX 79762	3b. Phone No. (include area code) 432-368-1352	8. Lease Name and Well No Mudge Federal #1E
4. Location of Well (Report location clearly and in accordance with any State requirements, *) At surface SWNW 2385 FNL - 770 FWL At proposed prod zone		9. API Well No. 30-045-33271
14. Distance in miles and direction from nearest town or post office*		10. Field and Pool, or Exploratory Basin Fruitland Coal
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 2039.26	11. Sec., T. R. M. or Blk. and Survey or Area Section 30, T26N, R11W NMPM E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19. Proposed Depth 1531'	12. County or Parish San Juan
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6118' GL	22. Approximate date work will start*	13. State NM
17. Spacing Unit dedicated to this well W/2 - 318.68 acres		
20. BLM/BIA Bond No. on file		
23. Estimated duration		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must 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 must be filed with the appropriate Forest Service office). | 6. Such other site specific information and/or plans as may be required by the BLM~ |

25. Signature <i>Vicki Westby</i>	Name (Printed/Typed) Vicki Westby	Date 8/8/2005
Title Staff Agent		

Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 7/24/07
Title Acting AFM Minerals	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.

RCVD JUL25'07

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.

OIL CONS. DIV.

*(Instructions on page 2)

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

ConocoPhillips Company proposes to drill a vertical wellbore to the Basin Fruitland Coal formation. This well will be drilled and equipped in accordance with the attachments submitted herewith. This application is for APD/ROW.

ConocoPhillips will use mudloggers to prevent us from accessing the Pictured Cliffs formation.

This well does not require HPA notification

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

NMOCD 7-26-07
BH

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer DD, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

RECEIVED
070 FARMINGTON NM
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-33271		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 31589	*Property Name MUDGE FEDERAL		*Well Number 1E
*GRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY		*Elevation 6118'

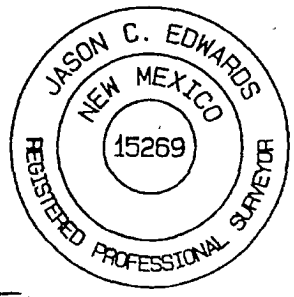
10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	30	26N	11W		2385	NORTH	770	WEST	SAN JUAN

11 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
12 Dedicated Acres 318.68 Acres - W/2					13 Joint or Infill		14 Consolidation Code		15 Order No.

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

1314.06'		1327.92'		2623.50'		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <i>Vicki Westby</i> Signature Vicki R. Westby Printed Name Staff Agent Title <i>August 9, 2005</i> Date		
LOT 1	2385'	LEASE: 1-149-IND-7971- 2039.26 acres						
LOT 2								
770'		LAT: 36°27.5920' N LONG: 108°03.0475' W DATUM: NAD27					18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Survey Date: MARCH 31, 2005 Signature and Seal of Professional Surveyor  <i>JASON C. EDWARDS</i> Certificate Number 15269	
5280.00'	30							
LOT 3 UNLEASED FEDERAL		LEASE: NM-0359212						
LOT 4								
1294.92'		1303.50'		2607.00'				

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

Form C-103
May 27, 2004

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

WELL API NO.	30-045-3371
5. Indicate Type of Lease	STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name	Mudge Federal
8. Well Number	1E
9. OGRID Number	217817
10. Pool name or Wildcat	Basin Fruitland Coal

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other	
2. Name of Operator	ConocoPhillips Company
3. Address of Operator	4001 Penbrook, Odessa, TX 79762
4. Well Location	
Unit Letter E	2385 feet from the North line and 770 feet from the West line
Section 30	Township 26N Range 11W NMPM San Juan County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6118' GL

Pit or Below-grade Tank Application <input checked="" type="checkbox"/> Closure <input type="checkbox"/>			
Pit type Drill	Depth to Groundwater 50-100'	Distance from nearest fresh water well >1000'	Distance from nearest surface water 200-1000'
Liner Thickness:	mil	Below-Grade Tank: Volume	bb1s; Construction Material

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

The pit will be constructed and closed in accordance with Rule 50 and as per COPC June 2005 General Pit Plan on file with the NMOCD. See the attached diagram that details the location of the pit in reference to the proposed wellhead. The drill pit will be lined. The drill pit will be closed after the well has been completed

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

SIGNATURE Peggy Jaro

TITLE Sr. Associate DATE 8/8/2005

Type or print name
For State Use Only

E-mail address: Telephone No.

Deputy Oil & Gas Inspector,
District #3

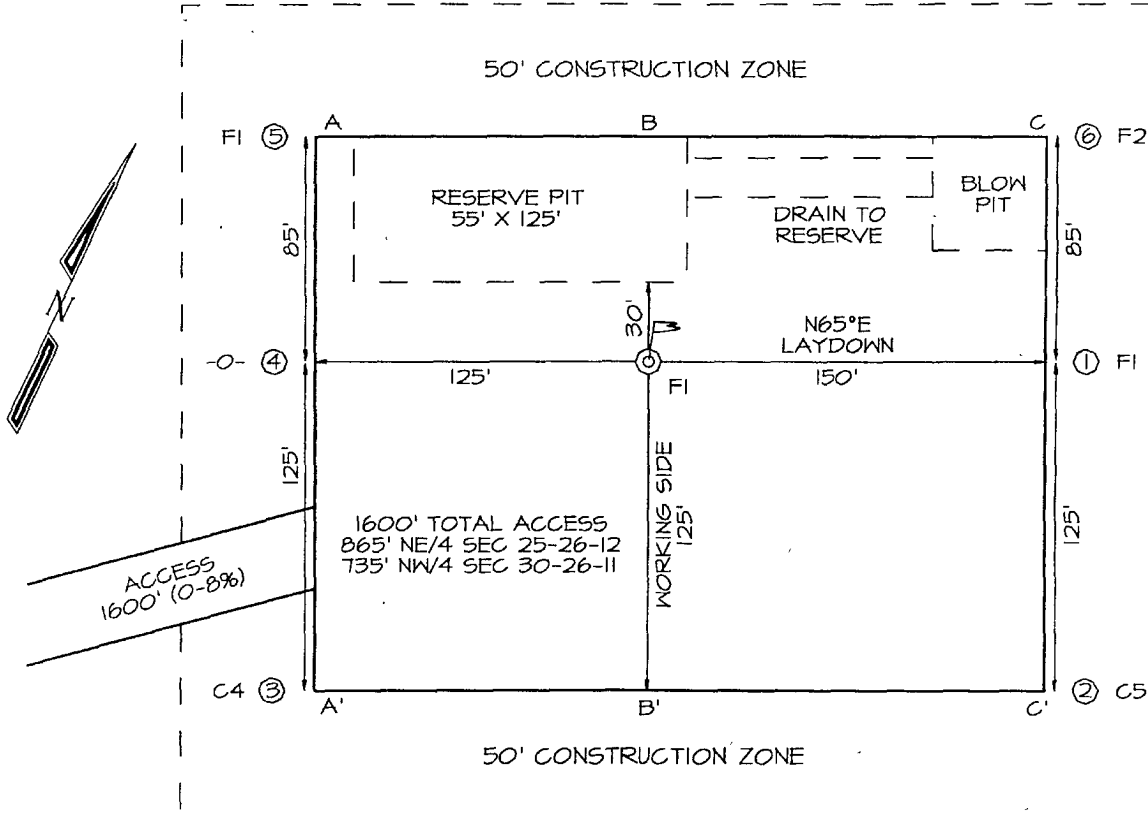
APPROVED BY: [Signature]
Conditions of Approval (if any):

TITLE DATE JUL 26 2007

LATITUDE: 36.45987° N
LONGITUDE: 108.05079° W
DATUM: NAD1927

PLAT NOTE:

SURFACE OWNER
Navajo Allotted Land



A-A'						
6129'						
6119'						
6109'						

B-B'						
6129'						
6119'						
6109'						

C-C'						
6129'						
6119'						
6109'						

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

MUDGE FEDERAL 1E

Lease:		AFE #:		AFE \$:	
Field Name: WEST		Rig:		State: NM	County: SAN JUAN
Geoscientist: Glaser, Terry J		Phone: (832)486-2332	Prod. Engineer: Fontenot, Jessie C		Phone: +1 832-486-3483
Res. Engineer: Harrington, Tim R.		Phone: 832-486-2207	Proj. Field Lead:		Phone:

Primary Objective (Zones):

Zone	Zone Name
R20001	FRUITLAND COAL(R20001)

Location: Surface

Straight Hole

Latitude: 36.46 Longitude: -108.05 X: Y: Section: 30 Range: 11W

Footage X: 770 FWL Footage Y: 2385 FNL Elevation: 6118 (FT) Township: 26N

Tolerance:

Location Type: Year Round Start Date (Est.): Completion Date: Date In Operation:

Formation Data: Assume KB = 6131 Units = FT

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
OJAM	191	5940	<input type="checkbox"/>			Possible water flows.
KRLD	282	5849	<input type="checkbox"/>			
Surface Casing	500	5631	<input type="checkbox"/>			12-1/4 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
FRLD	1221	4910	<input type="checkbox"/>			Possible gas.
PCCF	1331	4800	<input type="checkbox"/>			
Total Depth	1531	4600	<input type="checkbox"/>			7 7/8" hole. 5 1/2", 17 ppf, J-55, LTC Casing. Circulate cement to surface.

Reference Wells:

Reference Type	Well Name	Comments
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Logging Program:

Intermediate Logs: ☐ Log only if show ☐ GR/ILD ☐ Triple Combo

TD Logs: ☐ Triple Combo ☐ Dipmeter ☐ RFT ☐ Sonic ☐ VSP ☒ TDT

Additional Information:

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
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Comments: Zones - Drilling Mud Program:

Surface: spud mud

Intermediate: fresh water mud with bentonite and polymer as needed

Centralizer Program:

Surface: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 3rd, & 4th joints

Intermediate: centralizers placed 10' above the shoe latched over a stop collar and at the top of the 2nd, 4th, 6th, 8th, & 10th joints

Turbolizers placed one per joint from the top of the Ojo Alamo to the top of the Kirtland Shale

Mudge Federal #1E
Halliburton Cementing Program

SURFACE CASING :

Drill Bit Diameter	12.25"	
Casing Outside Diameter	9.625"	Casing Inside Diam. 9.001"
Casing Weight	32.3	ppf
Casing Grade	H-40	
Shoe Depth	500'	
Cement Yield	1.21	cuft/sk
Cement Density	15.6	lb/gal
Excess Cement	125	%
Cement Required	298	sx

SHOE 500 ', 9.625 ", 32.3 ppf, H-40 STC

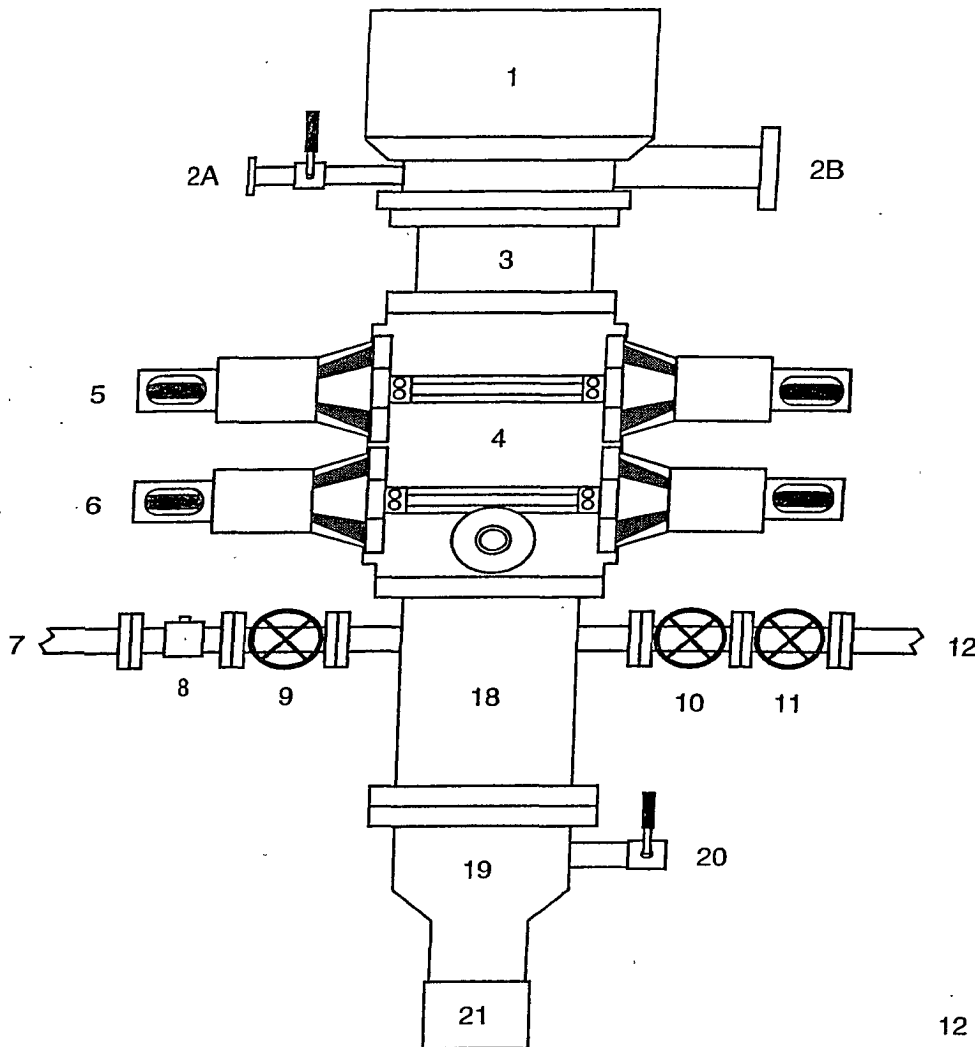
INTERMEDIATE CASING :

Drill Bit Diameter	7.875"	
Casing Outside Diameter	5.5"	Casing Inside Diam. 4.892"
Casing Weight	17	ppf
Casing Grade	J-55	
Shoe Depth	1531'	
Lead Cement Yield	2.91	cuft/sk
Lead Cement Density	11.5	lb/gal
Lead Cement Excess	160	%
Tail Cement Length	306.2'	
Tail Cement Yield	1.33	cuft/sk
Tail Cement Density	13.5	lb/gal
Tail Cement Excess	160	%
Lead Cement Required	159	sx
Tail Cement Required	104	sx

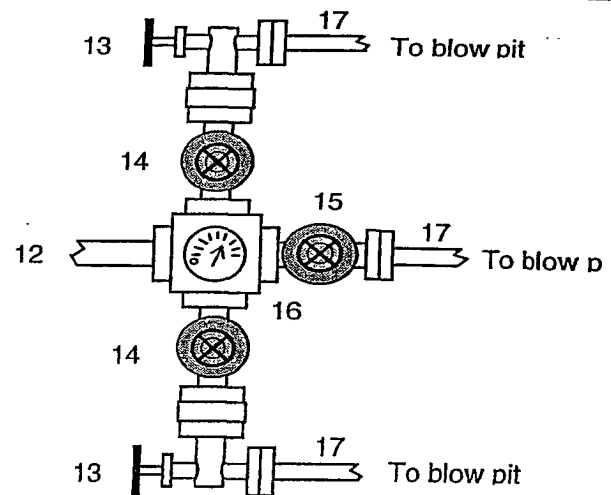
SHOE 1531 ', 5.5 ", 17 ppf, J-55 LTC

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to Intermediate Casing Point & Setting 7" Intermediate Casing



1. Rotating Head
- 2A. Fill-up Line & valve
- 2B. Flowline
3. Spacer Spool
4. Double Ram BOP (11", 3000 psi)
5. Pipe Rams
6. Blind Rams
7. Kill Line
8. Kill Line Check Valve
9. Kill Line Valve
10. Inner Choke Line Valve (3")
11. Outer Choke Line Valve (3")
12. Choke Line (3")
13. Variable Choke
14. Choke Line Valve (2")
15. Panic Line Valve (3")
16. Choke Manifold Pressure Gauge
17. Choke Line (2")
18. Mud Cross Spacer Spool
19. Casing Head "A" Section
20. Casing Head "A" Section 2" Valve
21. 9 5/8" Casing Collar



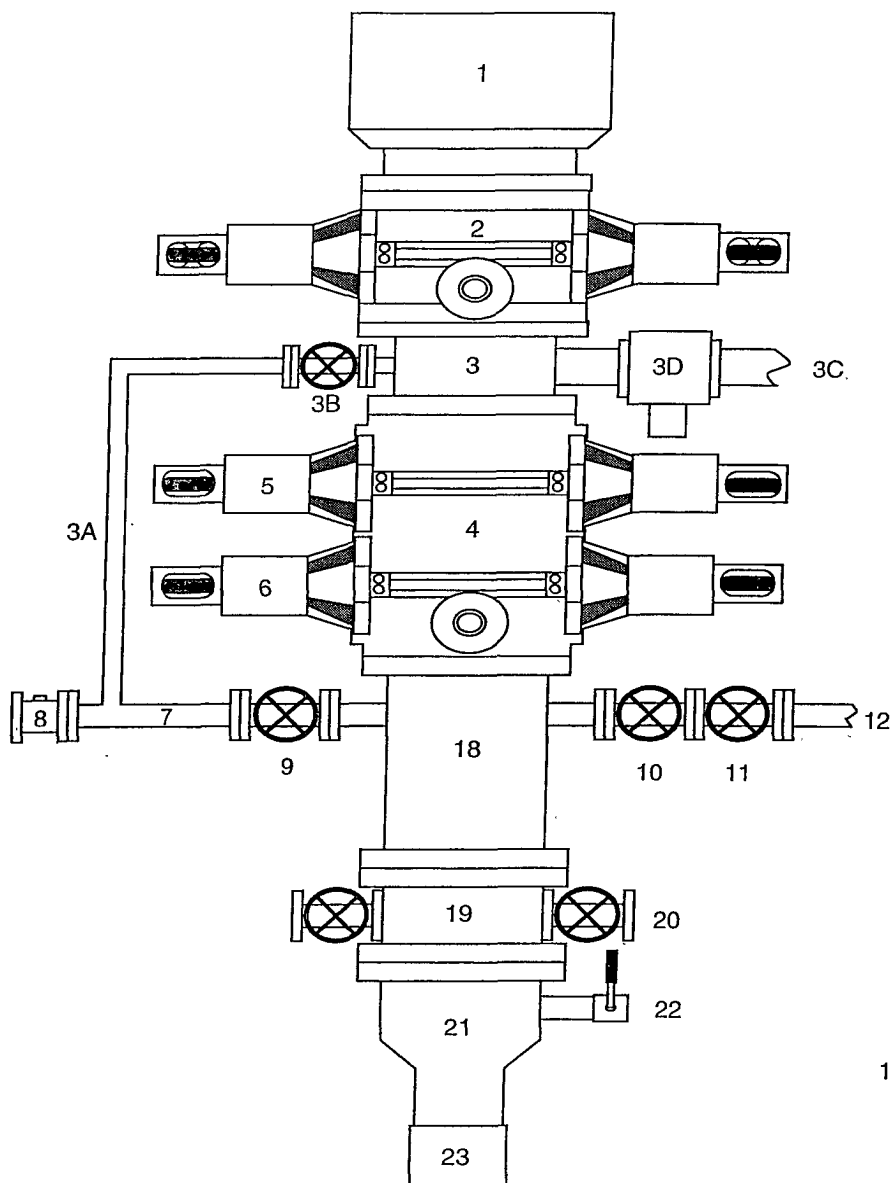
A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe rams and choke manifold will be tested to 200 psi to 300 psi (low pressure test) for 10 minutes and to 1000 psi (high pressure test) for 10 minutes. Then the test plug will be removed, and the 9-5/8" casing will be pressure tested against closed blind rams to 200 psi to 300 psi for 10 minutes and to 1000 psi for 30 minutes (this value is one 44% of the minimum internal yield pressure of the 9-5/8" casing). (Note: per regulatory requirements we will wait on cement at least 8 hrs after placement before testing the 9-5/8" surface casing). Then an 8-3/4" hole will be drilled to intermediate casing point and 7" intermediate casing will be run and cemented.

In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

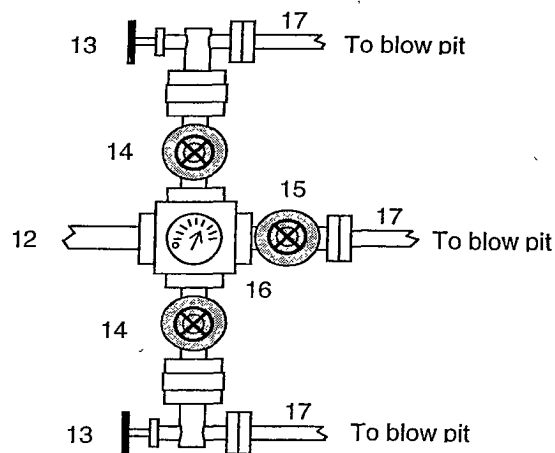
1. Inner Kelly cock Valve with handle

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Cavitation Program



1. Stripping Head
2. Single Ram BOP (7-1/16", 3M)
3. Mud Cross
- 3A. Equalizing Line (2")
- 3B. Wing Valve (2-1/16", 3M)
- 3C. Blooie Line (2 ea, 5" OD)
- 3D. HCR Valve (1 ea per line, 4-1/16")
4. Double Ram BOP (7-1/16", 3M)
5. Pipe Rams
6. Blind Rams
7. Kill Line
8. Kill Line Check Valve
9. Kill Line Valve
10. Inner Choke Line Valve (3")
11. Outer Choke Line Valve (3")
12. Choke Line (3")
13. Variable Choke
14. Choke Line Valve (2")
15. Panic Line Valve (3")
16. Choke Manifold Pressure Gauge
17. Vent Line (2")
18. Spacer Spool
19. Tubing Head
20. Tubing Head Valves (2- 9/16")
21. Casing Head "A" Section
22. Casing Head "A" Section 2" Valve
23. 9-5/8" Casing Collar



This BOP arrangement and test program is for the cavitation program. The BOP will be installed on the tubing head. The 7" casing will be pressure tested against closed blind rams to 200 psi to 300 psi for 10 minutes and to 1800 psi for 30 minutes - this test pressure is 48% of the minimum internal yield strength of 3740 psi for the 7", 20#, J-55, STC casing. The pipe rams and choke manifold will be tested to 200 psi to 300 psi (low pressure test) for 10 minutes and to 1800 psi (high pressure test) for 10 minutes - This test will be done with a test plug or possibly without a test plug (ie against casing). If we conduct this test without a test plug we will ensure that we have sufficient drillstring weight in the hole to exceed the upward force generated by the test.

We use a power swivel and air/mist to drill the 6-1/4" hole in our cavitation program. We do not use a kelly. In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

1. String floats will be used inside the drillpipe
2. Stab-in TIW valve for all drillstrings in use
3. Each blooie line is equipped with a hydraulically controlled valve (HCR valve).

Property : Mudge Federal **Well #:** 1E

Surface Location:

Unit: E **Section:** 30 **Township:** 26N **Range:** 11W

County: San Juan **State:** New Mexico

Footage: 2385 **from the** North **line,** 770 **from the** West **line.**

CATHODIC PROTECTION

ConocoPhillips (COP) proposes to drill a cathodic protection deep well groundbed for the subject well. COP will drill a hole vertically at the surface large enough to accommodate 20 feet of 8 inch diameter PVC pipe for surface casing to assist in further drilling and loading. Casing may be cemented in place for stability if needed. COP will drill a 6-7/8" hole to an anticipated minimum depth of 300' (maximum depth of 500'). Cement plugs will not be used unless more than one water zone is encountered. Prior drilling history for the area indicates only one zone to that depth. If more than one water zone is encountered, notification will be made and details of cement and casing will be provided.

All drilling activity will remain on the existing well pad and a Farmington based company will be doing the drilling for ConocoPhillips.