

Form 3160-3
(February 2005)

SECRETARY'S POTASH

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 **EA 11-207**5. Lease Serial No.
USA NMNM 54112

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.
Strawberry 7 Federal 79. API Well No.
30-015-3848510. Field and Pool, or Exploratory
Hackberry; Bone Spring, NM11. Sec., T. R. M. or Blk. and Survey or Area
Sec 7-T19S-R31E12. County or Parish
Eddy13. State
NM1a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone2. Name of Operator
Devon Energy Production Co., LP3a. Address **20 North Broadway
OKC, OK 73102**3b. Phone No. (include area code)
(405)-552-7802

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

At surface **NENE 340' FNL & 340' FEL Lot A**At proposed prod. zone **NENE 340' FNL & 340' FEL Lot A**14. Distance in miles and direction from nearest town or post office*
Approximately 11 miles south of Loco Hills, NM.15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any) **340'**16. No. of acres in lease
8017. Spacing Unit dedicated to this well
4018. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. **760'**19. Proposed Depth
TVD 9900'20. BLM/BIA Bond No. on file
CO-110421. Elevations (Show whether DF, KDB, RT, GL, etc.)
3495.8' GL22. Approximate date work will start*
12/15/201023. Estimated duration
45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. I, 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

Name (Printed/Typed)

Date

Stephanie A. Ysasaga**11/01/2010**

Title

Sr. Staff Engineering Technician

Approved by (Signature)

/s/ Linda S.C. Rumball

Name (Printed/Typed)

Date

FEB 1 2011

Title

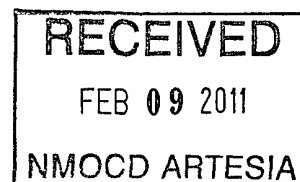
STATE DIRECTOR

Office

NM STATE OFFICEApplication 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.

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)



DRILLING PROGRAM

Devon Energy Production Company, LP

Strawberry 7 Federal 7

Surface Location: 340' FNL & 340' FEL, Unit A, Sec 7 T19S R31E, Eddy, NM

Bottom hole Location: 340' FNL & 340' FEL, Unit A, Sec 7 T19S R31E, Eddy, NM

1. Geologic Name of Surface Formation

a. Permian

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

a. Rustler	555'	Barren
b. Salado	680'	Barren
c. Tansil Dolomite	2190'	Barren
d. Yates	2300'	Oil
e. Seven Rivers	2625'	Oil
f. Queen	3185'	Oil
g. San Andres	3720'	Oil
h. Delaware	4415'	Oil
i. Bone Springs	6385'	Oil
j. 1 st Bone Spring Ss	7785'	Oil
k. 2 nd Bone Spring Lime	8040'	Oil
l. 3 rd Bone Spring Lime	9035'	Oil
m. 3 rd Bone Spring Ss	9450'	Oil
n. 2 nd Bone Spring Middle Ss Base	8860'	Oil
o. Total Depth	TVD 9900'	

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at 625' and circulating cement back to surface. The fresh water sands will be protected by setting 9 5/8" casing at 3100' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 9 5/8" casing. All casing is new and API approved.

3. Casing Program:

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17 1/2"	0'-625'	13 3/8"	0'-625'	48#	STC	H-40
12 1/4"	625'-3100'	9 5/8"	0'-3100'	40#	LTC	J-55
8 3/4"	3100'-9900'	5 1/2"	0'-9900'	17#	LTC	N-80

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design</u>	<u>Burst Design</u>	<u>Tension Design</u>
	<u>Factor</u>	<u>Factor</u>	<u>Factor</u>
13 3/8"	2.99	6.72	12.20
9 5/8"	1.23	2.15	2.74
5 1/2" BTC	1.36	1.67	2.06

4. Cement Program:

a. 13 3/8" Conductor

Lead: 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.4% Fresh Water, 13.5 ppg. **Yield:** 1.75 cf/sk

Tail: 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water, 14.8 ppg. **Yield:** 1.35 cf/sk.. **TOC @ surface.**

b. 9 5/8" Intermediate

Lead: 750 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water, 12.5 ppg. **Yield:** 1.96 cf/sk

Tail: 300 sacks Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 52.7% Water, 14.8 ppg. **Yield:** 1.34 cf/sk. **TOC @ surface.**

c. 5 1/2" Production

1st Stage

1,300 sacks Class C Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 58.3% Fresh Water, 13.3 ppg. **Yield:** 1.56 cf/sk

DV TOOL at ~4,500 ft**2nd Stage**

Lead: 350 sacks Class C Cement + 1% bwow Calcium Chloride + 0.125 lbs/sack Cello Flake + 157.8% Fresh Water, 11.4 ppg. **Yield:** 2.89 cf/sk

TOC @ 2,600 ft

Tail: 150 sacks (60:40) Poz (Fly Ash):Class C Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 63.2% Fresh Water, 13.8 ppg. **Yield:** 1.37cf/sk. **TOC @ 2,600 ft**

TOC for All Strings:

Surface:	0'
Intermediate:	0'
Production:	2,600'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. Actual cement volumes will be adjusted bases on fluid caliper and caliper log data.

5. Pressure Control Equipment:

BOP DESIGN: The BOP system used to drill the intermediate hole will consist of a 13-5/8" 3M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" 3M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the intermediate casing shoe.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

6. Proposed Mud Circulation System

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' – 625'	8.4-9.0	30-34	NC	Fresh Water
625' – 3100'	9.8-10.0	28-32	NC	Brine
3100' – 9900'	8.6-9.0	28-32	NC-12	Fresh Water

The necessary mud products for weight addition and fluid loss control will be on location at all times.

7. Auxiliary Well Control and Monitoring Equipment:

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

8. Logging, Coring, and Testing Program:

- a. Drill stem tests will be based on geological sample shows.
- b. If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
- c. The open hole electrical logging program will be:
 - i. Total Depth to Intermediate Casing Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.

- | | |
|---|------------------------------------|
| ii. Total Depth to Surface | Compensated Neutron with Gamma Ray |
| iii. No coring program is planned | |
| iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests. | |

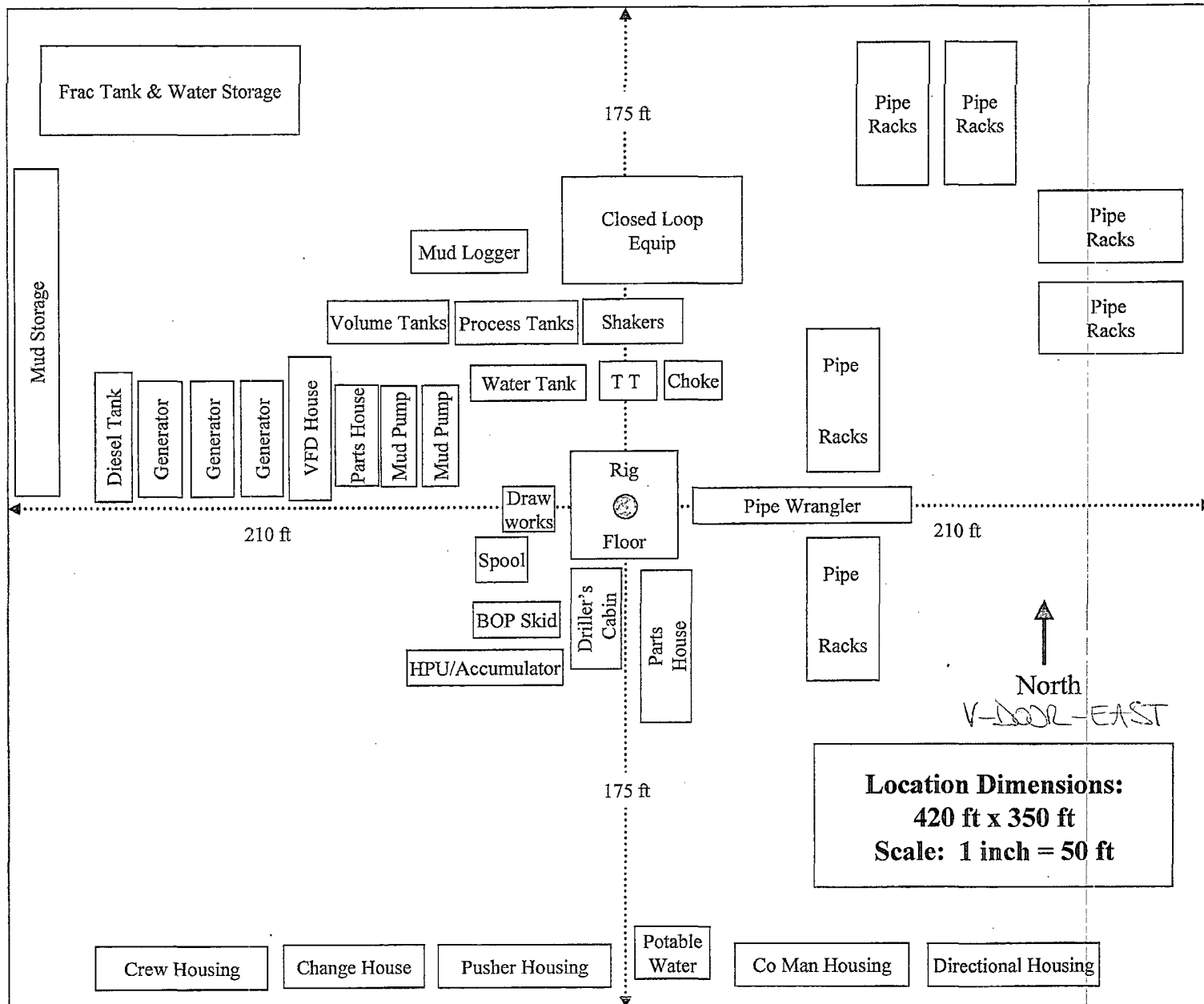
9. Potential Hazards:

- a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3600 psi and Estimated BHT 145°. No H2S is anticipated to be encountered.

10. Anticipated Starting Date and Duration of Operations:

- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

H&P Flex Rig Location Layout



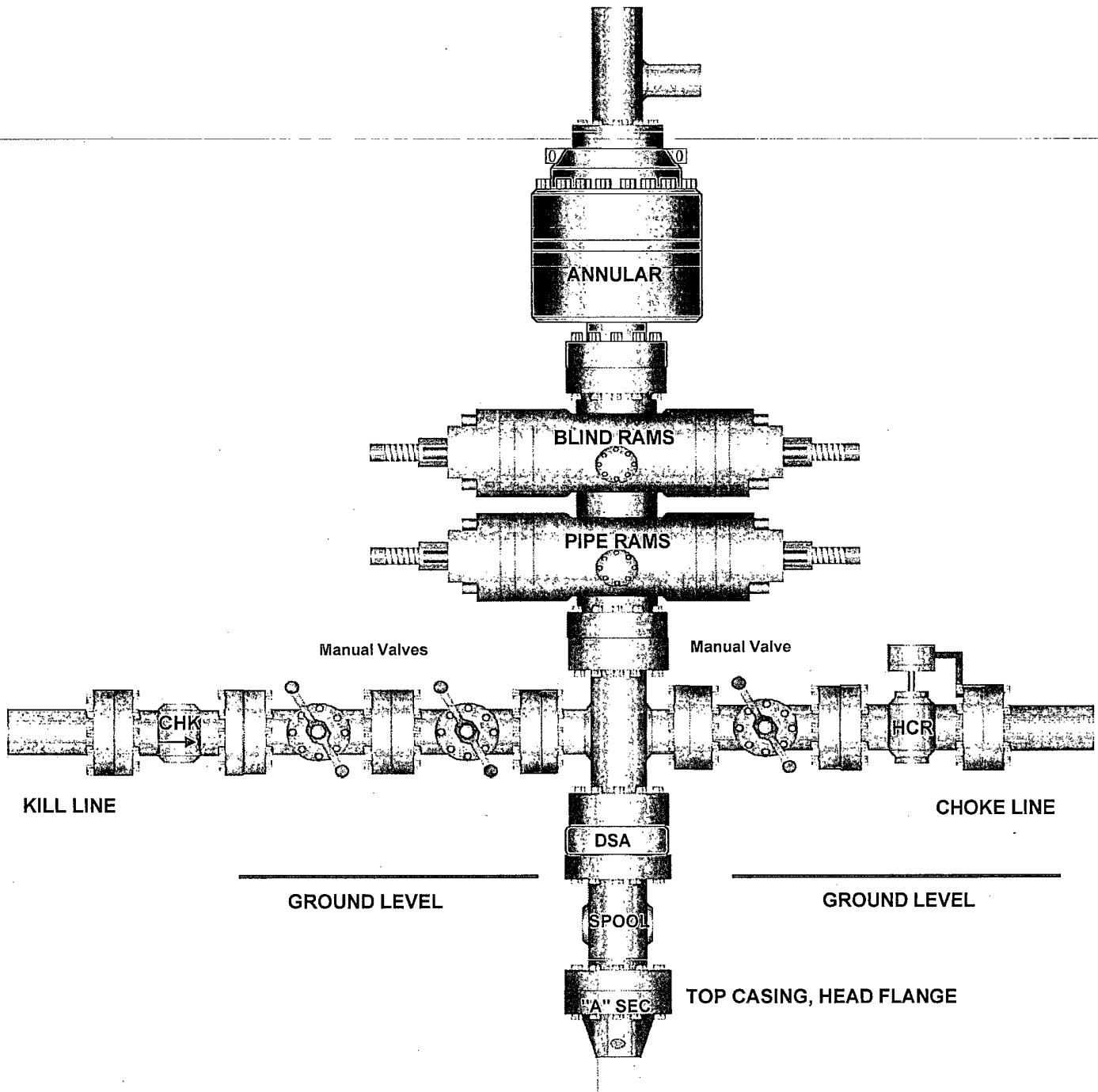
Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP

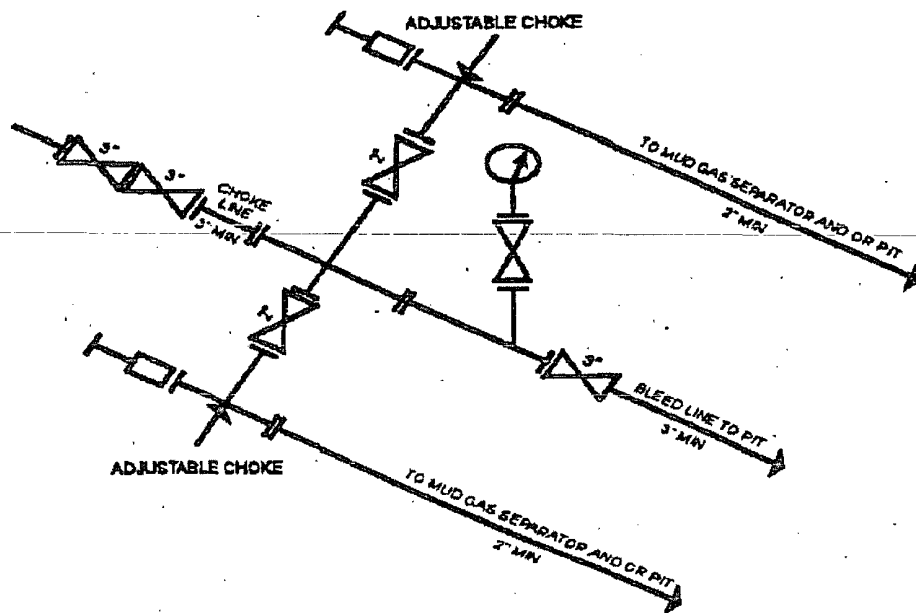
Strawberry 7 Federal 7

Surface Location: 340' FNL & 340' FEL, Unit A, Sec 7 T19S R31E, Eddy, NM
Bottom hole Location: 340' FNL & 340' FEL, Unit A, Sec 7 T19S R31E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

13-5/8" x 3,000 psi BOP Stack





3M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY
 [54 FR 39528, Sept. 27, 1989]