

EXXON CORPORATION - Yates "C" FEDERAL #36

Section 31, T20S, R28E
Eddy County, New Mexico
BLM Eight Point Plan
March 1990

1. The Estimated Tops of Important Geologic Markers (Note: All depths in this plan are expressed in feet)

<u>Formation</u>	<u>Tops</u>
Tansill	Surface
Yates	625
Capitan Reef	800
Delaware	2500
Bone Springs	4900

2. The estimated depths at which the top and the bottom of anticipated water, oil, gas or other mineral bearing formations are expected to be encountered.

	<u>Top</u>	<u>Bottom</u>	<u>How Protected</u>
Fresh Water	Surf	600	Surface casing - cemented to surface.
Capitan Reef (Fresh Water)	800	2,500	Intermediate casing - cemented to surface.
Delaware (Hydrocarbons)	2,500	4,900	Production casing - cemented to 2,000.
Bone Springs (Hydrocarbons)	4,900	5,000 (TD)	Production casing - cemented to 2,000.

3. Minimum Specifications for Pressure Control Equipment

A. Wellhead and X-mas tree equipment:

"A" Section - 13-3/8" 8RD x 13-5/8" top flange, 3,000 psi WP, sour
"B" Section - 8-5/8" 8RD x 11" top flange, 2,000 psi WP, sour service.
Tubinghead - 5-1/2" 8RD x 2-7/8" 2,000 psi WP, sour service.
No X-mas tree will be required, well will be rod pumped.

B. Blowout preventer equipment:

<u>Type</u>	<u>Pressure Rating</u>	<u>Installed on Casing</u>
Type - SA BOP	2,000 psi	13-3/8"
Type - SA BOP	2,000 psi	8-5/8"

Additional preventers may be added and/or preventers with higher pressure ratings may be substituted depending on equipment provided by drilling contractor. Diagram of the BOP equipment is attached.

C. Testing:

Operational testing - an operational test consisting of closing the annular preventer on the drill pipe will be performed weekly.

Pressure testing - initial pressure testing will be performed after nipping up on the 13-3/8", and 8-5/8" casing strings, but prior to drilling out. Initial test pressures are as follows:

<u>Casing</u>	<u>Annular BOP</u> <u>Low psi / High psi</u>
13-3/8"	200 / 1,000
8-5/8"	200 / 1,500

Subsequent pressure tests of the BOP equipment will be conducted as follows:

1. Upon any change in rams or other component of the BOP stack and/or choke manifold.
2. At least every thirty (30) days.

Subsequent test pressures are as follows:

<u>Casing</u>	<u>Annular BOP</u> <u>Low psi / High psi</u>
13-3/8"	200 / 1,000
8-5/8"	200 / 1,500

BOP drills - a drilling crew proficiency test to perform the well shut-in procedure will be performed at least once each week with each crew.

D. BOP control unit:

Unit will be hydraulically operated and have one control station located at least 60' from wellbore.

4. Auxiliary Equipment and Proposed Casing Program

A. Auxiliary equipment:

Kelly cocks - upper and lower installed on kelly.

Safety valve - full opening ball type valve to fit each type and size of drill pipe in use will be available on the rig floor in the open position at all times for use when the kelly is not connected to the drill string.

B. Casing:

<u>String</u>	<u>Hole Size</u>	<u>Size / Weight/Grade</u>	<u>Depth Interval</u>
Conductor	24"	20" Line Pipe	0 - 40
Surface	17 1/2"	13-3/8" 48.0 K55	0 - 600
Intermediate	11" or 12-1/4"	8-5/8" 32 & 24 K55	0 - 2,500
Production	7 7/8"	5-1/2" 14 & 15.5 K55	0 - 5,000

Substitutions regarding weight and grade may be required due to availability. All pipe is in new condition.

<u>Safety Factors</u>	<u>13-3/8"</u>	<u>8-5/8"</u>	<u>5-1/2"</u>
Collapse	1.0	1.125	1.125
Burst	1.1	1.1	1.1
Tension	1.33*	1.5	1.5

* Compression

C. Cement:

<u>Hole Size</u>	<u>Casing</u>	<u>Depth</u>	<u>Cement Type</u>	<u>Approximate Cement Volume</u>	<u>Top of Cement (Gauge Hole)</u>
24"	20"	40	Readi-mix	40 ft ³	Surface
17-1/2"	13-3/8"	600	Lite Cement & Class "C"	425 ft ³	Surface
11" or 12-1/4"	8-5/8"	2,500	Lite Cement & Class "C"	1050 ft ³	Surface
7-7/8"	5-1/2"	5,000	Lite Cement & Class "C"	600 ft ³	2,000'

Calculated cement volumes will be adequate to cover all fresh water and hydrocarbon bearing formations.

D. Casing test procedures:

1. Surface casing (13-3/8") - 1,000 psi test pressure.
2. Intermediate casing (8-5/8") - 1,500 psi test pressure.
3. Production casing (5-1/2") - 1,500 psi test pressure.

E. Circulating Medium Characteristics

A. Type and anticipated characteristics of circulating medium.

Depth Interval	Mud Type	Weight (ppg)	FV (Sec/Ot)	PV (Cp)	YP (#/100 SF)	WL (cc/ 30 min.)	pH
0- 600	Spud	8.3-9.0	30-40	NO CONTROL			
600- 2500	FW	8.3-9.0	28-30	NO CONTROL			
2500- 5000	CBW MUD	8.6-9.5	26-36	5-15	5-15	5-30	9.5-10.5 < 9

B. Quantities of mud and weighting materials:

A sufficient inventory of mud materials and treating equipment will be maintained to control mud properties adequately for well control and drilling requirements.

C. Mud system monitoring equipment:

Trip tank - tank will be used to keep hole full of fluid on trips and to monitor hole behavior on trips.

6. Anticipated Type and Amount of Coring, Testing, and Logging

Coring program: Conventional cores: 2,500 - 2,800; 3,000 - 3,250;
3,430 - 3,680.

Drill stem tests: none currently planned.

Logging program:	Logs	From	To
	DLL/MSFL	TD	2,500'
	Sonic	TD	2,500'
	EPT/NGT	TD	2,500'
	RFT's	TD	2,500'
	LDT/CNL	TD	2,500'

7. Bottom Hole Pressure and Other Potential Hazards

A. No H₂S is anticipated.


B. Lost circulation zones:

Tansill 0 - 600'
Capitan Reef 800 - 2500'
Delaware 2500 - 4900'

8. Other Facets of the Proposed Operation

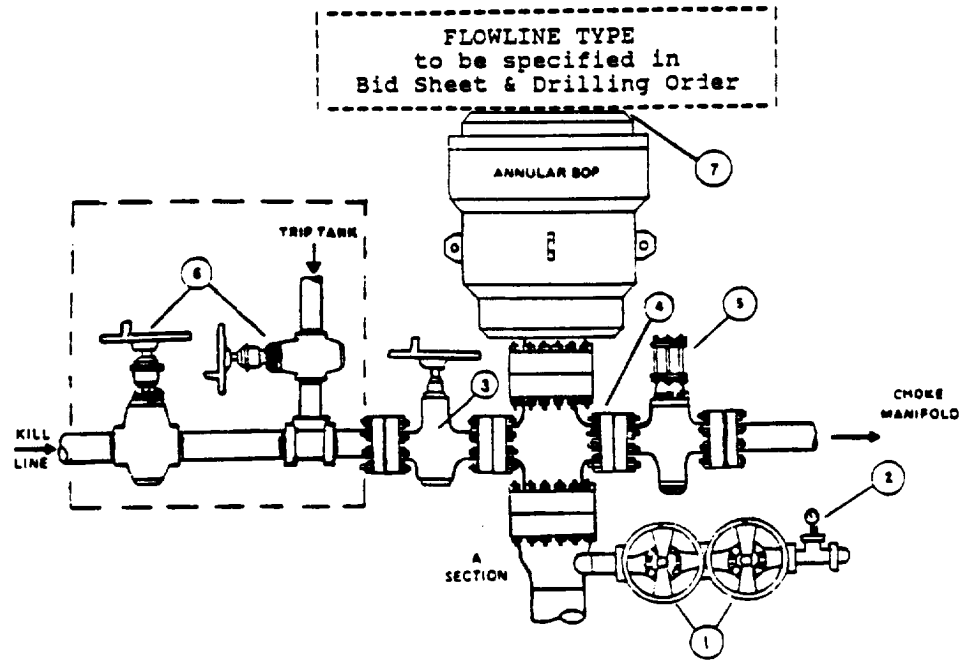
Completion operations: Perforate, stimulate, and production test the Delaware/Bone Spring interval based on electric logs and shows.

Contact W. F. Burchard at 915/688-7892 or Bob Karell at 915/688-7883 with any questions concerning this eight-point plan.


W. F. Burchard

TYPE-SA BOP STACK

ANNULAR



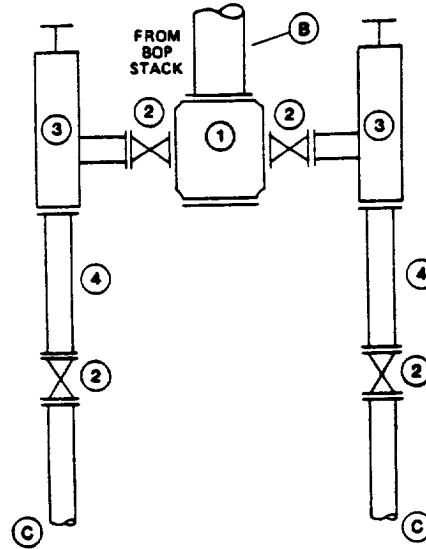
COMPONENT SPECIFICATIONS

1. Screwed or flanged plug or gate valves -- 2" minimum nominal dia. -- same working pressure as "A" section.
2. Tee with tapped bullplug, needle valve, and pressure gauge.
3. Flanged plug or gate valve -- 2" minimum nominal dia. -- same working pressure as BOP stack.
4. Drilling spool. -- 3" choke and 2" kill line minimum nominal dia.
5. Flanged hydraulically controlled gate valve -- 3" minimum nominal dia. -- same working pressure as BOP stack.
6. Flanged or screwed gate or plug valve -- 2" minimum nominal dia. -- same working pressure as BOP stack. NOTE: Valves are optional if trip tank is tied into Flowline Type.
7. Top of annular preventer must be equipped with an API flange ring gasket. All flange studs must be in place or holes filled in with screw type plugs.

NOTE:

- A. Unless specified otherwise in the Bid Letter and/or Contract, the contractor will furnish and maintain all components shown above Exxon's wellhead.
- B. The choke line between the drilling spool and choke manifold should not contain any bend or turn in the pipe body. Any bend or turn required should be made with a running tee with a blind flange or welded bullplug. All connections should be flanged or welded. All fabrications requiring welding must be done by a certified welder. Welds should be stress relieved when required.
- C. Plug valves should be equivalent to the Howco Lo-Torc and gate valves equivalent to the Cameron Type 'F'.

TYPE-2 CHOKE MANIFOLD



TO RESERVE PIT OR FLARE PIT

COMPONENT SPECIFICATIONS

1. Flanged or studded cross - 3" x 3" x 2" x 2" minimum nominal diameter with blind flange and equipped with needle valve and pressure gauge.
2. Flanged plug or gate valve - 2" minimum nominal diameter; valve to have same working pressure rating as choke.
3. Flanged manually adjustable choke equipped with tungsten carbide stems and seats and at least 3/4" orifice opening.
4. Flanged spacer spool - 2" minimum nominal diameter and approximately 18" length.

NOTE:

- A. The rated working pressure of the choke manifold will be specified in the Bid Letter and Drilling Order and all equipment must conform to the specifications herein.
- B. The choke line between the BOP stack and choke manifold should not contain any unnecessary bends or turns. Any required turns must be made with a running tee and a blind flange or welded bullplug. All connections must be either flanged or welded and all welding must be done by a certified welder.
- C. Flare lines must be laid to the reserve pit or flare pit and must be securely anchored.