

DRILLING PLAN

Attachment to BLM Form 3160-3

ARCO Permian

Well: West Brushy Federal #3

1850' FNL, 2310 FEL

UNIT G

Section 8, T26S-R29E

Eddy County, New Mexico

1. Surface Geological Formation

Yates Formation (Sand and Anhydrite)

2. Estimated Tops of Geological Markers

<u>Formation</u>	<u>TVD</u>
Salt	700'
Base Salt/Anhydrite	2825'
Bell Canyon	2845'
Cherry Canyon	3725'
Brushy Canyon	5000'

3. Estimated Tops of Possible Water, Oil, Gas or Mineral:

Sands above 500'	Water
Cherry Canyon & Brushy Canyon	Oil or Gas

4. Pressure Control Equipment

<u>Interval, TVD</u>	<u>Pressure Control Equipment</u>
0' – 580'	No pressure control required
580' – TD	11", 2M psi double ram preventer, or 11" 2M psi annular preventer

Exhibits 1, 2 and 3 show the BOP stack arrangement, the choke manifold arrangements and the BOP specifications, respectively. The BOPE will be hydraulically tested per BLM requirements outlined by Onshore Oil and Gas Order No. 2. Pipe rams and blind rams, if a double ram preventer is used, will be functioned on each trip out of the hole. All BOPE checks and tests will be witnessed by ARCO's representative and will be noted on the IADC daily drilling report. Accessories to BOPE will include an upper kelly cock, lower kelly cock, and floor safety valve; all with pressure rating equivalent to the BOP stack.

5. Proposed Casing and Cementing Program

	<u>Hole Size</u>	<u>Interval M.D.</u>	<u>Casing Size</u>	<u>Weight & Grade</u>
Surface	11"	0'-580'	8-5/8"	24.0# J-55
Production	7-7/8"	580'-5500'	5-1/2"	15.5# J-55

Cement Program: (Actual volumes will be based on caliper log when available)

Surface – Cement to surface with total of +/- 600 cu ft as follows:

Lead – 120 sxs 35/65 POZ:C + 6% Bentonite

Tail – 195 sxs "C" + 2% CaCl

Production - Cement to surface with total of +/- 800 cu ft as follows:

Lead - 330 sx 35/65 POZ:C + 6% gel

Tail – 470 sx 50/50 POZ:C + 32% gel + 3% salt + .4% FL-52

6. **Mud Program**

<u>Depth</u>	<u>Mud Type</u>	<u>Weight ppg</u>	<u>Funnel Viscosity</u>	<u>Water Loss</u>
0'-580'	Spud Mud	8.4-8.9	29-34	NC
580-2900'	Brine	10.0	28-30	NC
2900-3800'	SWG	10.0	30-35	≤ 15 cc

7. **Auxiliary Equipment**

Upper Kelly Cock, Lower Kelly Cock, and Full Opening Stabbing Valve

8. **Testing, Coring and Logging Program**

- A. Drill Stem Tests – None planned
- B. Coring – None planned
- C. Logging – Mud logging planned from 2500' to TD
- D. Electric Logs
 - Open Hole: GR, DLL/MLL, CNL/LDT TD to 2800'
 - Cased Hole: GR/CCL TD to 2800'

9. **Anticipated Abnormal Temperature, Pressure, or Hazards**

10. **Anticipated Starting Date and Duration of Operations**

Pending favorable weather and permit approval, construction work on this location is planned to begin in May, 2001. Construction work will require 2 days, move-in and rig up rotary tools, 1 day, drill and complete, 18 days. It is planned to spud the well in June, 2001.