

To supplement USGS Form 9-331C "Application for Permit to Drill, Deepen or Plugback", the following additional information is submitted to comply with USGS Order NTL-6.

ARCO OIL & GAS COMPANY

Operator: Div of Atlantic Richfield Company

Lease & Well No: Duthie Andrews WN #5

Location: Unit Letter "P" 660' FSL & 785' FEL  
Section 18-25S-37E, Lea County, N.M.

Lease, New Mexico LC054453

Development well x Exploratory well \_\_\_\_\_

1. See Well Location and Acreage Dedication Plat Form C-102.
2. See Form 9-331C for elevation above sea level of unprepared location.
3. The geologic name of the surface formation is:  
South Plains Alluvial
4. The type of drilling tools and associated equipment to be utilized will be: Rotary.
5. The proposed drilling depth will be 3750'.
6. The estimated tops of important geologic markers are:  

Yates	2720
Seven Rivers	3020
Queen	3160
7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are:  

Gas - Yates	2785'
Oil - Seven Rivers	3058'
Oil - Queen	3360'
8. The proposed casing program including the size, grade and weight-per-foot of each string has been indicated on Form 9-331C. All strings of casing will be New X Used \_\_\_\_\_.
9. See Form 9-331C for amount of cmt.

Cement 8-5/8" casing w/.400 sx Cl "C" .5# gilsonite/sx, 1/4# flocele/sx, 4% gel, 2% CaCl<sub>2</sub> followed by 250 sx Cl "C" w/2% CaCl<sub>2</sub>.

Cement 5 1/2" casing w/100 BBW, 15 BFW, followed by 675 sx HLC w/15# salt & 1/4# flocele/sx followed by 425 sx Cl "H" Thik-set w/3# salt/sx.

10. The pressure control diagram is attached to Form 9-331C. The following additional information of the pressure control equipment is as follows:

8-5/8" OD Csg: Size: 11" - series 900 double ram

Pressure Ratings: 3000 WP, 6000 T

Testing Procedure: Pressure up to 1500# before drilling out of csg.

Testing Frequency: Upon installation, daily and on all trips the kill lines to be flushed.

5 1/2" OD Csg: Size: 11" series 900 double ram

Pressure Ratings: 3000 WP, 6000 T

Testing Procedures: Pressure up to 1500# before drilling out of csg.

Testing Frequency: Upon installation, daily and on all trips the kill lines to be flushed.

11. The type and characteristics of the proposed circulating medium or mediums to be employed for rotary drilling and the quantities and types of mud and weighting material to be maintained will be as follows:

0 - 1200' FW based spud mud  
1200'- TD Brine water - mud up w/salt gel @ ± 2850

12. The testing, logging and coring programs will be:

Drill Stem Test

Logs

Coring

None

Open hole

None

GR-CNL-FDC-Caliper TD-1500'

GR-DLL-RXO TD-1500'

cased hole

CBL: TD - surface

13. There are no abnormal pressures or temperatures expected to be encountered.

14. The anticipated starting date will be Dec 12, 80 and completed approx Dec 24, 80

15. The auxiliary equipment to be used will consist of: Kelly cocks & a sub on floor w/full opening valve to be used when needed. Mud logging will not be necessary.

Jerry D. Schmidt  
District Drilling Supt.

received

DEC 16 1980

U.S. DEPARTMENT OF JUSTICE

473