

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.

Operator ARCO OIL & GAS COMPANY
Division of Atlantic Richfield Company
Lease & Well No: R. S. Crosby "A" #3
Location: Unit Letter M
Section 28-25E-37E Lea County, N.M.
Lease, New Mexico LC-034117a
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 Aluvium
4. The type of drilling tools and associated equipment to be utilized will be: Rotary.
5. The proposed drilling depth will be 3400'.
6. The estimated tops of important geologic markers are:
 - 1050' Anhydrite
 - 2400' Yates
 - 3150' Queen
7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are:
 - 1080' Water
 - 2690' Gas
 - 3200' Oil
 - 3320' Oil & Gas
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.~~ The proposed cmtg program is as follows:
Propose to run 9-5/8" OD 36# K-55 csg set @ 1200' & cmt to surf w/ 250 sx Cl "C" cmt contg 4% gel 1/4# Gilsonite, 1/4# Flocele/sk followed by 200 sx Cl "C" cmt w/ 2% CaCl₂. Circ to surf.
Propose to run 7" OD 23# K-55 csg set @ 3400' & cmt w/Light cmt contg 14% salt, 1/4# Flocele/sk followed by Cl "C" cmt contg 5# salt/sk, 2% CaCl₂. Circ to surf.

10. The pressure control diagram is attached to Form 9-331C. The following additional information of the pressure control equipment is as follows:
9-5/8" Csg: Size: 10" - Series 900 Dbl Ram
Pressure Ratings: 3000 WP, 6000 T
Testing Procedure: Pressure up to 1500# before drilling cmt plugs.
Testing Frequency: Upon installation, daily and on all trips, the kill lines will be flushed.

7" Csg: Size: 10" Series 900 Dbl Ram
Pressure Ratings: 3000 WP, 6000 T
Testing Procedures: Test to 1500 psi. Will not drill out
Testing Frequency: Upon installation for completion work

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' Fresh water spud mud
1200'- 3400' Brine water w/ lime for PH control

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

<u>Drill Stem Test</u>	<u>Logs</u>	<u>Coring</u>
None	GR-Neutron CNL-FDC DLL	None

13. There are no abnormal pressures or temperatures expected to be encountered.
14. The anticipated starting date will be 10-27-80 and completed approx 11-15-80
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.

James D. Schmidt
District Drilling Supt.

DEC 9 1980

Log pump input common
ELF
12/11/81
Matthews finding found