

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 Division of Atlantic Richfield Company  
Lease & Well No: R. S. Crosby "A" #2  
Location: Unit Letter "L"  
Section 28-25S-37E, Lea County, N.M.  
Lease, New Mexico LC-034117 (a)  
Re-Entry 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: Surface is South Plains Alluvium
4. The type of drilling tools and associated equipment to be utilized will be: ~~Rotary~~ &/or workover rig w/reverse circ equip.

5. The proposed drilling depth will be 3400.

6. The estimated tops of important geologic markers are:

725' Anhydrite	2400' Yates
1050' Top Salt	3050' 7 Rivers
2250' Base Salt	

7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are:

1072' Water
2820' Gas
3211' Oil
3295' 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~~ Casing f/liner of casing will be New X Used \_\_\_\_\_.

9. See Form 9-331C for amount of cmt. This is a re-entry into @ P & A well. Casing was left in well when plugged. Cmt liner 3000-3400' w/ 45 sx Cl "C" cmt w/2% CaCl<sub>2</sub> /sk. A cmt squeeze job to circ cmt behind production csg presently in well will be done. The amt and kind cmt to be determined from logs.

10. The pressure control diagram is attached to Form 9-331C. The following additional information of the pressure control equipment is as follows:  
7" OD Csg: Size: 10"- Series 900 Db1 Ram & Hyd.  
 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.  
                     Csg: Size:  
 Pressure Ratings: WP, T  
 Testing Procedures:  
 Testing Frequency:
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:  
 Drilling fluids to be used will consists of 10# salt gel mud to re-enter and drill cmt plugs to 3400'. Original TD 3460'.
12. The testing, logging and coring programs will be:
- |                        |   |               |
|------------------------|---|---------------|
| <u>Drill Stem Test</u> | <u>Logs</u>                             | <u>Coring</u> |
| None                   | CBL<br>GR-CNL FDC w/Caliper<br>Vertilog | None          |
13. There are no abnormal pressures or temperatures expected to be encountered.
14. The anticipated starting date will be 11/16/80 and completed approx 11/27/80.
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 for re-entry.

James W. Schmidt  
 District Drilling Supt.