

Attachment to "Application for Permit to Drill" Form 9-331 C  
 Nellis Federal Well No. 3, 660' FWL and 1,980' FNL, Section 8, T-19-S,  
 R-33-E, Lea County, New Mexico

1. Location

See Attached Form C-102

2. Elevation

See Attached Form C-102

3. Geologic name of surface formation.

Unknown

Quaternary

4. Type of drilling tools and associated equipment to be utilized.

See Form 9-331 C

5. Proposed drilling depth.

See Form 9-331 C

6. Estimated tops of important geologic markers.

Delaware	- 5,200'	Strawn	- 12,150'
Bone Springs	- 7,640'	Atoka	- 12,520'
3rd Bone Springs	- 10,400'	Middle Morrow	- 13,200'
Wolfcamp	- 10,860'		

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

Wolfcamp	- 10,860'
Atoka	- 12,520'
Middle Morrow	- 13,200'

8. Proposed casing program including size, grade, and weight of each string and whether it is new or used.

<u>Depth</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>New or Used</u>
400'	13-3/8"	48#	K-55 ST&C	New
5,000'	9-5/8"	32.3-36#	K-55 ST&C	New
13,700'	5-1/2"	15.5#	K-55 ST&C * LT&C	New
		17 #	K-55 LT&C	
		20 #	K-80 LT&C	

9. Proposed cementing program.

13-3/8" Casing - Sufficient to circulate to surface.  
 9-5/8" Casing - Sufficient to circulate to surface.  
 5-1/2" Casing - Sufficient to tie back to 9-5/8" casing.

10. Blow Out Preventer Program is Attached

11. 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.

0' - 400' - Native mud and water  
400' - 5,000' - Native mud, fresh water and brine, commercial mud  
5,000' - 12,400' - Native mud, fresh and brine water, and circulate reserve pit  
12,400' - TD - Add KCL for 3-4% system

12. Testing, logging and coring programs to be followed with provisions made for required flexibility.

5,000' - TD - Gamma Ray - CNL - FDC - Caliper  
5,000' - TD - Dual Laterolog - Micro SFL - GR  
400' - 5,000' - Gamma Ray

13. Any anticipated abnormal pressures or temperatures expected to be encountered or potential hazards such as hydrogen sulfide gas, along with plans for mitigating such hazards.

None anticipated.

14. Anticipated starting date and duration of operation.

Start February 28, 1978. Complete March 7, 1978

15. Other facets of the proposed operation, operator wishes to point out for the Geological Survey's consideration of the application.

None.

## APPLICATION FOR PERMIT TO DRILL

LEASE Nellis Federal WELL NO. 3  
LOCATION Unit E, Section 8, T-19-S, R-33-E  
POOL Buffalo Penn Morrow  
COUNTY Lea County, New Mexico

The undersigned hereby states that Amoco's representative, Mr. E. E. Pauley, personally contacted Mr. Larry Squires/Snyder Ranch, the ~~xxxxx~~/lessee of the surface land where the proposed work is to be conducted and advised him of the proposed work, the construction site and pertinent roads included in the project. It is further stated that, upon being fully advised of the extent of the work and the effect upon the surface, said owner has consented to the said work, and that ~~agreement as to the compensation for damages to the surface estate has been reached.~~

If the well is a producer, all pits will be cut, filled and levelled as soon as practical after the pits are dry. If the well is a dry hole, pits will be filled as above, a dry hole marker will be installed and the location and pad will remain intact.

Ray W. Cox  
Ray W. Cox  
Administrative Assistant

1-24-78

DATE