

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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OCT 1 1994

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APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

070 FARMINGTON, NM

1a. Type of Work DRILL	5. Lease Number SF-077386A
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator <b>MERIDIAN OIL</b> 14538	7. Unit Agreement Name
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name 7199 Johnson <del>Don</del>
4. Location of Well 240' FSL, 340' FEL  Latitude 36° 33' 24", Longitude 107° 53' 33"	9. Well Number 3 API # 30-045-29203
10. Field, Pool, Wildcat Basin Ft Coal/ 71629 Fulcher Kutz PC 77200	11. Sec., Twn, Rge, Mer. P Sec 21, T-27-N, R-10-W NMPM
12. County San Juan	13. State NM
14. Distance in Miles from Nearest Town 9 miles to Bloomfield	15. Distance from Proposed Location to Nearest Property or Lease Line 240'
16. Acres in Lease	17. Acres Assigned to Well 320 (E/2) 160 (NE/4)
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 1300'	19. Proposed Depth 2150'
20. Rotary or Cable Tools Rotary	21. Elevations (DF, FT, GR, Etc.) 6115' GR
22. Approx. Date Work will Start 4th quarter 1994	23. Proposed Casing and Cementing Program See Operations Plan attached This action is subject to technical and procedural review pursuant to 43 CFR 3105.3 and appeal pursuant to 43 CFR 3106.4
24. Authorized by: <u>[Signature]</u> Regional Drilling Engineer	Date <u>8/23/94</u>

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS"

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

Archaeological Report submitted by [Signature] Contract Arch. Tech. Report #569 dated 6-22-94  
Threatened and Endangered Species Report submitted by Ecosphere Environmental Services dated 6-25-94  
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

DISTRICT MANAGER

<p>16</p>	<p>USA SF-043260-B</p>	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Peggy Bradfield</i></p> <p>Signature Peggy Bradfield</p> <p>Printed Name Regulatory Affairs</p> <p>Title 10-19-94</p> <p>Date</p>
<p>RECEIVED OCT 24 1994</p>	<p>21</p> <p>USA SF-077386-A</p>	<p>18 SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>5-27-94</p> <p>Date of Survey</p> <p>Signature <i>W. C. Edwards</i></p> <p><b>W. C. EDWARDS</b> 6857</p> <p>6857</p> <p>Certificate Number</p>
<p>RECEIVED NOV 16 1994</p> <p>OIL CON. DIV. DIST. 3</p>	<p>340 240</p>	

OPERATIONS PLAN

**Well Name:** Johnson POW #1  
**Location:** 240'FSL, 340'FEL, Section 21, T-27-N, R-10-W  
 San Juan County, New Mexico  
 Latitude 36° 33' 24", Longitude 107° 27' 33"  
**Formation:** Basin Fruitland Coal  
**Elevation:** 6115'GL

Formation:	Top	Bottom	Contents
Surface	Nacimiento	894'	
Ojo Alamo	894'	1008'	aquifer
Kirtland	1008'	1593'	
Fruitland	1593'	1880'	gas
Fruitland Coal	1718'	1848'	gas
Pictured Cliffs	1880'	2056'	gas & salt water
Lewis	2056'		
Total Depth	2150'		

**Logging Program:** Mud logs from 1300' to Total Depth.  
 Dens/Neut/GL; Dens/GR; Micro/GR  
 Ind/GR/SP: surface-TD

**Mud Program:**

Interval	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud	8.4-8.9	40-50	no control
200-2150'	Non-dispersed	8.4-9.5	30-60	no control

**Casing Program:**

Hole Size	Depth Interval	Csg.Size	Wt.	Grade
12 1/4"	0 - 200'	8 5/8"	24.0#	K-40
7 7/8"	0 - 2150'	5 1/2"	15.5#	K-55

**Tubing Program:**

0 - 2150'	2 3/8"	4.7#	J-55
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**Float Equipment:** 8 5/8" surface casing - saw tooth guide shoe.  
 Centralizers will be run in accordance with Onshore Order #2.

5 1/2" production casing - float shoe on bottom. Three centralizers run every other joint above shoe. Two centralizers run every 3rd joint to the base of the Ojo Alamo @ 1008'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 1008'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

**Wellhead Equipment:** 8 5/8" x 5 1/2" x 2 3/8" x 11" 2000 psi xmas tree assembly.

August 23, 1994

**Cementing:**

8 5/8" surface casing - cement with 175 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (189 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing to 600 psi/30 minutes.

5 1/2" production casing - Lead w/354 sx of 65/35 Class "B" Poz w/6% gel, 2% calcium chloride, 5# gilsonite/sx and 1/4# flocele/sx. Tail w/100 sx Class "B" w/2% calcium chloride (745 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. If cement does not circulate to surface, a temperature log will be run after 8 hours to determine TOC.

**BOP and tests:**

Surface to TD - 11" 2000 psi (minimum double gate BOP stack (Reference Figure #1 and #2). Prior to drilling out surface casing, test rams to 600psi/30 min.

Completion - 6" 2000 psi (minimum) double gate BOP stack (Reference Figure #2). Prior to completion operations, test rams and casing to 2000 psi/15 min.

From surface to TD - choke manifold (Reference Figure #3).

Pipe rams will be actuated to least once each day and blind rams actuated once each trip to test proper functioning. An upper kelly cock valve with handle and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

**Additional information:**

\* This well will be drilled through the Pictured Cliffs, the PC will be tested, a retrievable bridge plug set between PC and basal Fruitland Coal. The basal coal and upper Fruitland Coal will be well tested and then produced for approximately 6 months, using a dual packer/dual pressure gauge configuration. The well will ultimately be used as a pressure observation well.

\* This well was presented before the New Mexico Oil Conservation Division in hearing August 4, 1994 for the above procedure, and for non-standard location purposes.

\* Anticipated pore pressure for the Fruitland is 300 psi.

\* New casing will be utilized.

\* Pipe movement (either rotation or reciprocation) will be done if hole conditions permit.



