

Submit to Appropriate
District Office
State Lease - 6 copies
Fee Lease - 5 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-101
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

API NO. (assigned by OCD on New Wells)

30-045-27285

5. Indicate Type of Lease

STATE ☐

FEE ☒

6. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work:

DRILL ☒

RE-ENTER ☐

DEEPEN ☐

PLUG BACK ☐

b. Type of Well:

OIL
WELL ☐

GAS
WELL ☒

OTHER ☐

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

7. Lease Name or Unit Agreement Name

Atlantic Fruitland 26 Com.

2. Name of Operator

ARCO OIL AND GAS COMPANY

8. Well No.

1 N/318-60

3. Address of Operator

Box 1610, Midland, Texas 79702

9. Pool name or Wildcat

Basin-Fruitland Coal Gas Pool

4. Well Location

Unit Letter G : 1360 Feet From The North Line and 1790 Feet From The East Line

Section 26

Township 31N

Range 10W

NMPM

San Juan

County

10. Proposed Depth

3100

11. Formation

Fruitland Coal

12. Rotary or C.T.

Rotary

13. Elevations (Show whether DF, RT, GR, etc.)

6303 GR

14. Kind & Status Plug. Bond

Statewide Blanket

15. Drilling Contractor

NA

16. Approx. Date Work will start

5-1-90

17. PROPOSED CASING AND CEMENT PROGRAM

N/2 320 Ac 3/8-60

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4	9 5/8	36	300	200	Surf
8 3/4	7	23	2600	700	Surf

RECEIVED

MAY 07 1990

OIL CON. DIV.,
DIST. 3

APPROVAL EXPIRES 11-7-90
UNLESS DRILLING IS COMMENCED.
SPUD NOTICE MUST BE SUBMITTED
WITHIN 10 DAYS.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Ken W. Gosnell TITLE Engr. Tech. DATE 5/4/90

TYPE OR PRINT NAME Ken W. Gosnell 915/688-5672 TELEPHONE NO.

(This space for State Use)

APPROVED BY Eric Busch TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE MAY 07 1990

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED
JAN 15 1964

OFFICE OF
THE DIRECTOR
JAN 15 1964

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I
P.O. Box 1990, Hobbs, NM 88340

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Branson Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Arco Oil & Gas Company			Lease Atlantic Fruitland 26 Com			Well No. 1		
Unit Letter G	Section 26	Township 31N.	Range 10W.	County NM/PM		San Juan		
Actual Footage Location of Well: 1360 feet from the North line and 1790 feet from the East line								
Ground level Elev. 6308		Producing Formation Fruitland		Pool Basin-Fruitland Coal Gas		Dedicated Acreage: 320-38.60 Acres		
<p>1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below. N/2</p> <p>2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).</p> <p>3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, forced-pooling, etc.? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If answer is "yes" type of consolidation Communitization</p> <p>If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)</p> <p>No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.</p>								
<p>ARCO - 1/2 AMOCO - 1/4 CONOCO - 1/4 (USA) NM-0606 Basin Minerals Ltd. #115 1164 F&W 15221E</p> <p>Basin Minerals - Full (fee)</p> <p>26</p> <p>1790'</p> <p>ARCO - 1/2 AMOCO - 1/4 CONOCO - 1/4 (USA) NM-0606</p>						<p>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>Signature <i>[Signature]</i> Printed Name Neil Talley Position Drilling Engineer Company ARCO Oil & Gas Date 4/23/90</p>		
<p>RECEIVED MAY 07 1990 OIL CON. DIV. DIST. 3</p>						<p>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 knowledge and belief.</p> <p>4-09-90</p> <p>Date Surveyed Roy A. Rush Signature & Seal of Professional Surveyor <i>[Signature]</i> ROY A. RUSH NEW MEXICO 8894 Certificate No. 8894</p>		

Drilling Discussion

Atlantic Fruitland Well: Generic Open Hole Completion

The planned casing program will be as follows:

- 9-5/8" @ 300' cemented to surface w/ 200 sx Cl "B" + 2% CaCl_2
- 7" @ 2600' cemented to surface w/ 500 sx 35/65 Cl "B" pozmix + 6% gel followed by 200 sx Cl "B" neat.

The well will be spudded with a 12-1/4" bit and drilled to 300' using a fresh water spud mud. After setting surface casing, the shoe will be drilled out with a 7-7/8" bit and the hole will be continued to 2600' or 50' above the Fruitland. A low solids, fresh water gel/polymer mud system will be utilized consisting of reserve pit make-up water. No hole problems or drilling difficulties are anticipated if the mud is properly maintained. A water loss of less than 20 cc is recommended to minimize hole heave from reactive shales. After setting 7" casing the drilling rig will be moved off the location and a specially equipped completion unit moved in prior to penetrating the Fruitland.

The 7" float shoe will be drilled out with a 6-1/4" bit and 4-3/4" DC's on 3-1/2" drill pipe circulating with FW and air. The well will be drilled to TD using air/mist as the circulating medium under a "controlled blowout" environment. A stripper head, two(2) blind rams and two(2) pipe rams will be utilized for well control and to divert the gas flow to a 7" blooie line where the gas will be flared. Due to "caving-in" and "fill-up" of coal and shale in the wellbore while flowing the Fruitland under balance stuck pipe can be a significant problem. The well will be flowed until a minimal amount of hole caving and fill-up is observed. After clean up, a snubbing unit will be rigged up and the 3-1/2" drill string snubbed out of the hole. A 2-3/8", 4.7#, J-55, EUE OE tbg string will then be snubbed into the well and the tree nipped-up to the wellhead.

It is anticipated that 5 days will be required to drill the well and an additional 10 days for completion operations.

Drilling Prognosis



Well name Atlantic Fruitland Well Open Hole Completion w/o liner.		Date 02/90									
Authorization numbers											
District or province Central District - West Area											
Location Sec.24,25,26,27,28,32,33,34 T31N-R10W & Sec. 3,4,5 T30N-R10W San Juan County, N. M.											
Objectives Fruitland@ 2600'											
Total vertical depth 3100	Total measured depth 3100										
Elevation To be surveyed (+/- 6550')											
Estimated formation tops Fruitland - 2600'											
Well design											
Conductor Provided by drilling contractor.											
Surface Casing 9-5/8", 36#, K-55, STC set in a 12-1/4" hole to 300'. Cemented to surface w/ 200 sx of CL"B" w/ 2% CaCl2.											
Protective casings and liners None											
Production casing 7", 23#, N-80, LTC casing set in a 8-3/4" hole at 2,600'. Cement to surface w/ 500 sx of 65/35/6 w/ FLA followed by 200 sx CL "B" with FLA.											
Production liners None											
Casinghead 9- 5/8" x 11" 3000 psi bradenhead. 11" 3000 psi x 7 1/16" 5000 psi tubinghead.											
Mud program <table border="1"><tr><td>0 - 300'</td><td>FW spud mud</td><td>9.0 ppg, 45 vis</td></tr><tr><td>300' - 2,600'</td><td>LSND/Polymer</td><td>8.7-9.6 ppg, 30-43 vis, w/ 10 cc.</td></tr><tr><td>2,600' - 3,300'</td><td>Air/Mist/FW</td><td></td></tr></table>			0 - 300'	FW spud mud	9.0 ppg, 45 vis	300' - 2,600'	LSND/Polymer	8.7-9.6 ppg, 30-43 vis, w/ 10 cc.	2,600' - 3,300'	Air/Mist/FW	
0 - 300'	FW spud mud	9.0 ppg, 45 vis									
300' - 2,600'	LSND/Polymer	8.7-9.6 ppg, 30-43 vis, w/ 10 cc.									
2,600' - 3,300'	Air/Mist/FW										
Logging program NONE											
Mud Logging Two (2) man logger from 2600 to 3100											
Evaluation Drill Coal under balance and determine flow rate @TD											