

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

30-045-29143

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL  
WELL ☐

GAS  
WELL ☒

OTHER

SINGLE  
ZONE ☒

MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

Conoco, Inc. 5073

3a. Area Code & Phone No.

(915) 486-4548

3. ADDRESS OF OPERATOR

10 Desta Dr. Ste 100W, Midland, TX 79705

4. LOCATION OF WELL (Report location clearly and in accordance with applicable requirements)

At surface

1840' FSL & 1445' FWL

At proposed prod. zone

Fruitland Coal

OIL CON. DIV.

DIST 3

10. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE

15. DISTANCE FROM PROPOSED

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drg. unit line, if any)

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

18. DISTANCE FROM PROPOSED LOCATION  
TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH

3062' TVD

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DP, GR, or SR)

6610' GR

22. APPROX. DATE WORK WILL START

5/1/94

23. PROPOSED CASING AND CEMENTING PROGRAM

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED

HOLE SIZE	CASING SIZE	WEIGHT/FOOT	GRADE	THREAD TYPE	DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	54.5 #	K-55	ST&C	250'	180 SXS
11"	8-5/8"	32 #	K-55	BTRC	3335'	520 SXS
7-7/8"	Open Hole				5549' MD	

It is proposed to drill this horizontal well as a Basal Seam Fruitland Coal Gas Well according to the following attachments:

- 1) Well Location and Acreage Dedication Plat (C-102).
- 2) Surface Use Plan.
- 3) Wells, Topo, & Location Maps (EXHIBITS A.1, A.2, A.3).
- 4) Wellsite Layout & Cross Sections (EXHIBITS B.1, B.2)
- 5) Drilling Plan (EXHIBITS C.1, C.2, C.3, C.4, C.5).
- 6) BOP Information & Diagram (EXHIBITS D.2, D.3).
- 7) Production Location (EXHIBIT E).

A 2" steel (.156 WT, GR-B, 100# WP, 1000# OP) natural gas pipeline will be layed from this well to the existing FC Fed. Com #8 and buried a minimum of 36" below the surface.

Application of Conoco Inc. for a high angle/horizontal directional drilling pilot project, special operating rules therefor and an unorthodox producing interval was approved by the NMOCD February 28, 1994 by Order R-10071.

IN ANY SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

*James M. Hoover*

TITLE Sr. Conservation Coordinator DATE 4/20/94

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED  
AS AMENDED

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

R-10071

NMOCD

\*See Instructions On Reverse Side

JUN 22 1994

DISTRICT MANAGER

Submits to Appropriation  
District Office  
State Loans - 4 copies  
Fee Loans - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I  
P.O. Box 1903, Hobbs, NM 88240

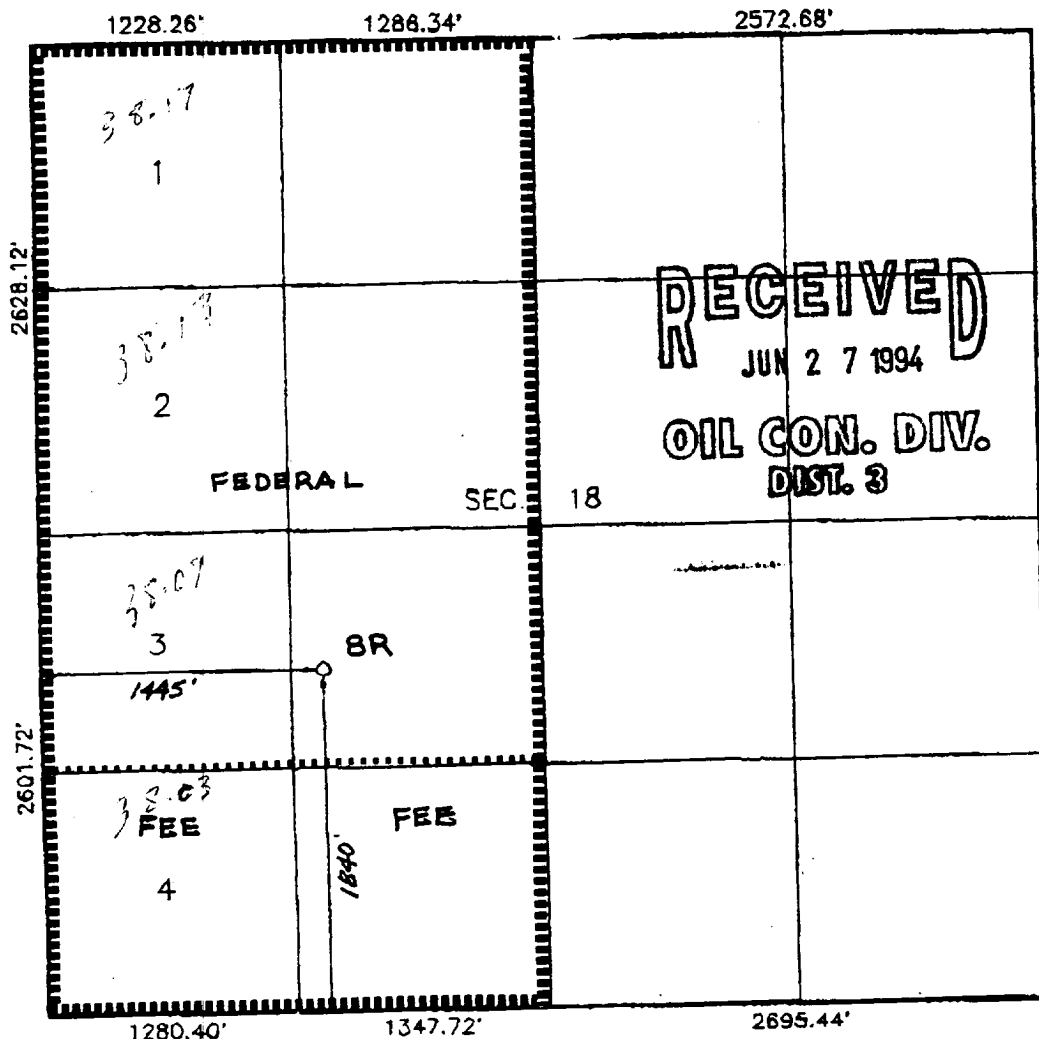
DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator <b>CONOCO INC.</b>			Lease <b>FC FED. COM.</b>		Well No. <b>8R</b>
Link Letter <b>K</b>	Section <b>18</b>	Township <b>32 NORTH</b>	Range <b>11 WEST</b>	County <b>SAN JUAN</b>	
Actual Surface Location of Well: <b>1840</b> feet from the <b>SOUTH</b> <b>1445</b> feet from the <b>WEST</b> line					
Ground level Elev. <b>6610'</b>	Producing Formation <b>Fruitland Coal</b>		Foot <b>Basin Fruitland Coal</b>		Dedicated Acreage: <b>320 3/4</b> Acres
<p>1. Outline the acreage dedicated to the subject well by colored pencil or ballpoint marker on the plat below.</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, force-pooling, etc.?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If answer is "yes" type of consolidation <u>Communitization</u></p> <p>If answer is "no" list the owners and exact descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)</p> <p>No acreage will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-consolidated unit, allocating such interest, has been approved by the Division.</p>					



OPERATOR CERTIFICATION

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

Signature  
Jerry W. Hoover  
Printed Name  
Jerry W. Hoover  
Position  
Sr. Conservation Coordinator  
Company  
Conoco Inc  
Date  
4/20/94

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was placed 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.

2/17/94

Signature  
Don C. Edwards  
Printed Name  
Don C. Edwards  
Position  
Professional Surveyor  
Number  
3857

6857

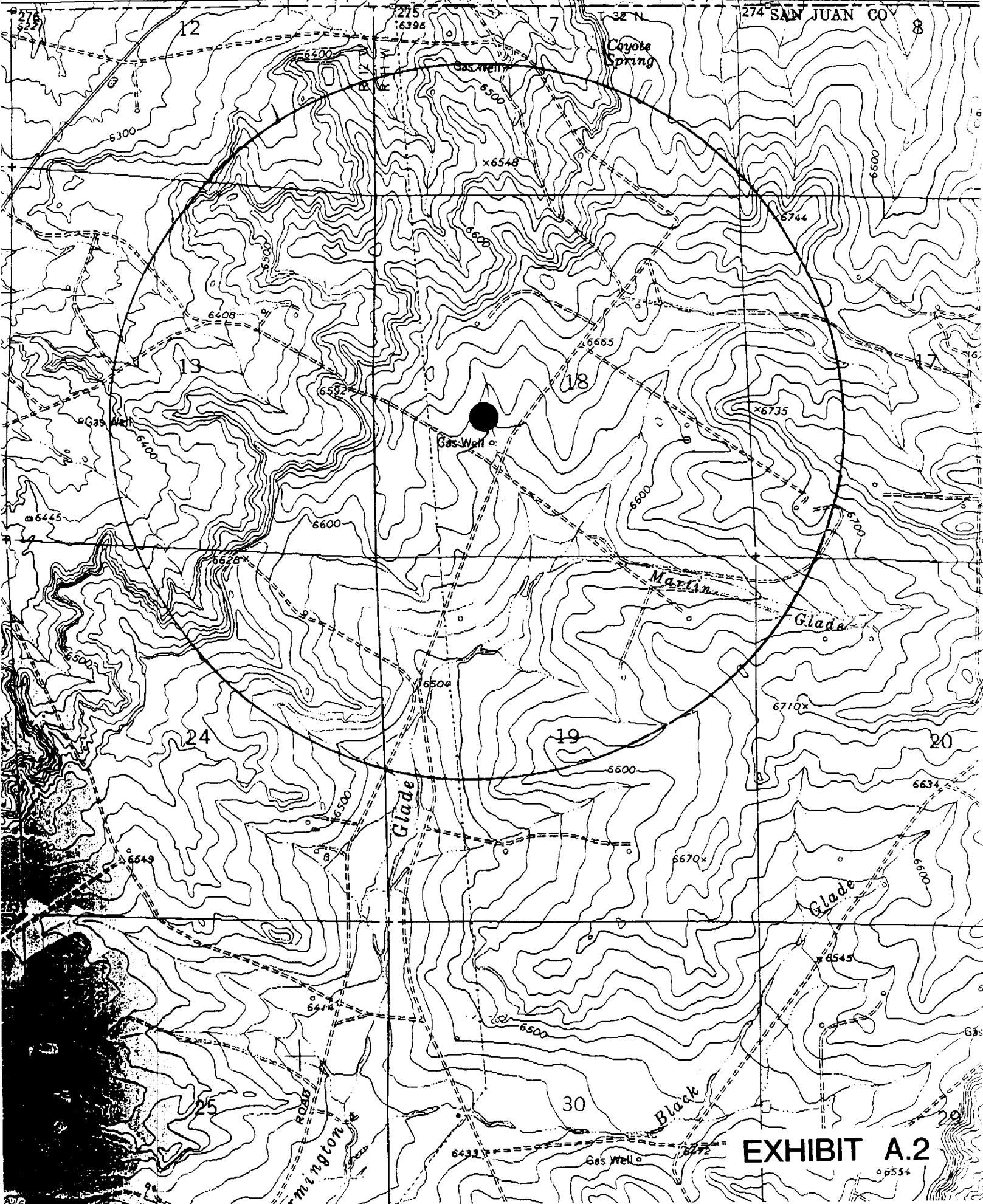


EXHIBIT A.2





**FC Federal Com 8R**

RECEIVED  
SEP 17 1987

SURFACE LOCATION: 1840' FSL & 1445' FEL, Sec. 18, T-32N, R-11W

BOTTOM HOLE LOCATION: 790' FNL & 790' FWL, Sec. 18, T-32N, R-11W

**CASING AND CEMENTING PROGRAM**

<u>Footage</u>	<u>Casing</u>	<u>Cement</u>
250'	13-3/8", 54.5#, K-55, ST&C	<u>180 sxs</u> CI "B" + 2% CaCl 15.6 ppg, 1.18 cu. ft./sx
3335'	8-5/8", 32#, K-55, BTC	<u>370 sxs</u> 35/65/6 CI "B" + 6.25 pps Kolseal + 10% Salt + 1/4 pps Celloflake + .2% SMS 12.5 ppg, 2.10 cu. ft./sx <u>150 sxs</u> CI "B" + 2% CaCl 15.6 ppg, 1.18 cu. ft./sx

**13-3/8" Surface Casing**

1. Turbulator type centralizers will be run one per joint to surface.
2. A minimum of 1-1/2 hole volumes will be circulated prior to cementing to condition the hole for adequate mud displacement.
3. A 20 bbl fresh water spacer will be pumped ahead of cement.
4. Cement will be circulated to surface. If cement returns are not obtained, the 17-1/2" X 13-3/8" annulus will be cemented using 1" line pipe with neat cement plus 3% CaCl<sub>2</sub> until cement is at surface.
5. A chronological log of the cement job will be sent to the BLM following completion of the job. The log will include: Pump rate, pump pressure, slurry density, and slurry volume.

**8-5/8" Casing**

1. Turbulator type centralizers will be run every other joint to just below the base of the Ojo Alamo Formation. Centralizers will then be run every fourth joint to be directional KOP (kick off point). Positive standoff centralizers will be run in the center of every joint through the build section from the KOP to total depth of the hole section, and bowspring centralizers will be run across each collar.

2. A minimum of 1-1/2 hole volumes will be circulated prior to cementing to condition the hole for adequate mud displacement.
3. A 20 bbl fresh water spacer will be pumped ahead of cement.
4. If cement returns are not received at surface, a temperature log or cement bond log will be run as required per BLM to determine TOC.
5. A chronological log of the cement job will be sent to the BLM following completion of the job. The log will include: Pump rate, pump pressure, slurry density, and slurry volume.

#### 7-7/8" Hole

Open hole completion is planned for the 7-7/8" hole section.

#### MUD PROGRAM

Interval	Mud Weight (lbs/gal)	Viscosity (secs)	Fluid Loss (cc)	Mud Type
0' - 250'	8.4 - 9.4	Native	N/C	Spud Mud
300' - 3335'	8.4 - 10.0	30 - 45	N/C	LSND/Polymer
3335' - 5549'	N/A	N/A	N/A	Air/Air-mist

The hole interval from 3335' MD (3062' TVD) to 5549' MD (3062' TVD) will be drilled using Air/Air-mist drilling. No DST's are planned. Mudlogging is planned below 500'. Plans are to complete the well as an open-hole completion in the Basal Seam of the Fruitland Coal formation.

**RECEIVED**  
**MAY 16 1994**  
 BUREAU OF LAND MANAGEMENT  
 FARMINGTON DISTRICT OFFICE

**FC FED COM 8R  
SEC 18, T32N, R11W  
SAN JUAN COUNTY, NEW MEXICO**

Conoco proposes to drill the FC Fed Com 8R well as a directional/horizontal hole to 5549' MD (3062' TVD). The well will develop gas reserves in the Basal Seam of the Fruitland Coal formation. Please see the attached Well Plan Outline for the proposed mud program and estimated formation tops. Please see the attached Vertical Section, Horizontal Plan, and Section View for a description of the proposed direction program and a pictorial concept of the well program.

The well plan calls for setting 13-3/8" casing at  $\pm$  250'. Next an 11" hole will be drilled to  $\pm$  3335' MD (3062' TVD) and 8-5/8" intermediate casing will be set. A 7-7/8" hole is planned to total depth of the well at  $\pm$  5549' MD (3062' TVD). Plans are to complete the well as an open-hole completion. The surface and bottom hole location and casing and cement program are planned as follows:

Surface: 1840' FSL & 1445' FEL Sec. 18-32N-11W

PBHL: 790' FNL (4490' FSL) & 790' FWL Sec. 18-32N-11W

**CASING AND CEMENTING PROGRAM:**

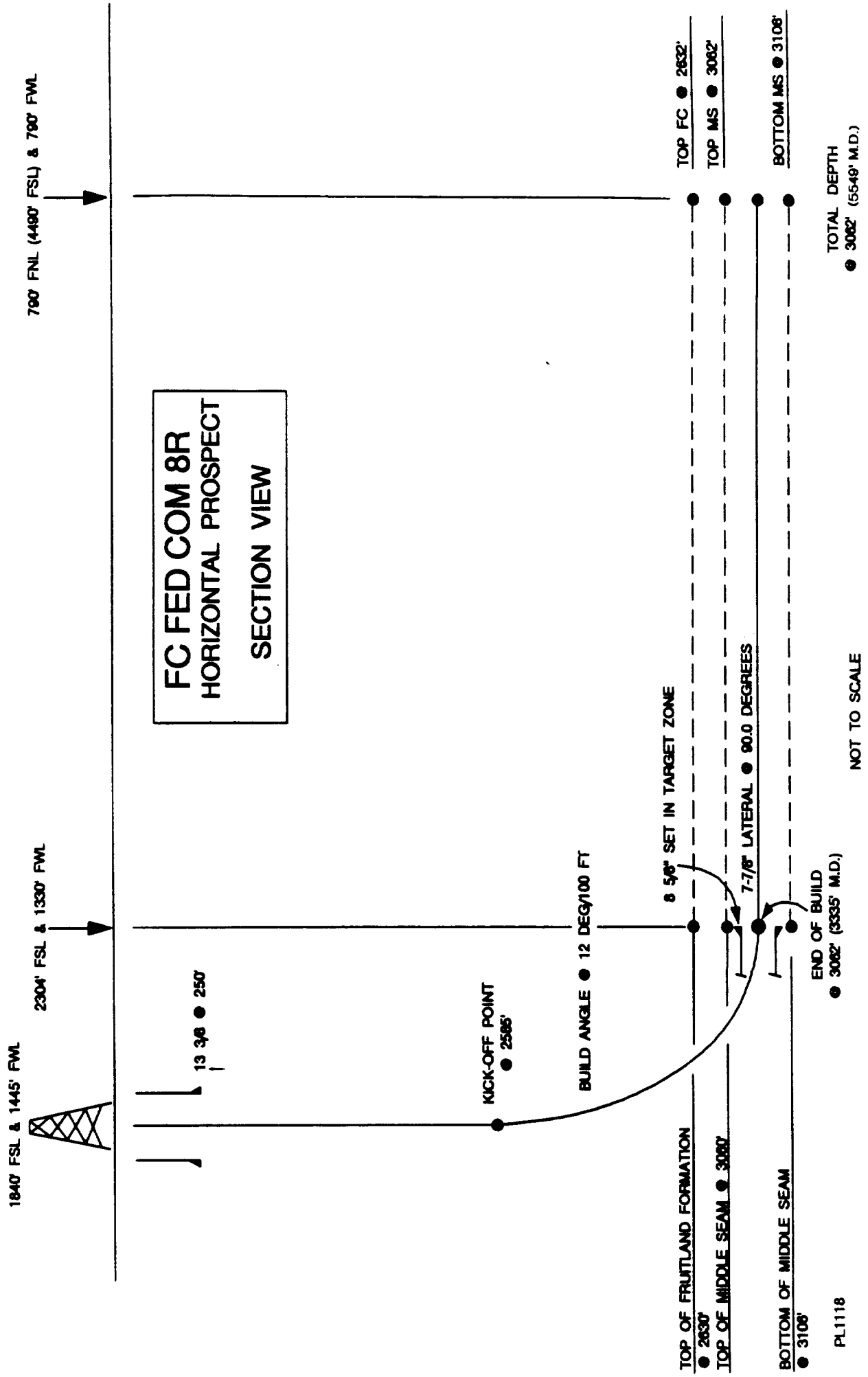
Footage	Casing	Cement
250'	13-3/8" 54.5#, K-55, ST&C	<u>180</u> sxs Cl "B" + 2% CaCl 15.6 ppg, 1.18 cu. ft./sx
3335'	8-5/8" 32#, K-55, BTC	<u>370</u> sxs 35/65/6 Cl "B" + 6.25 pps Kolseal + 10% Salt + 1/4 pps Celloflake + .2% SMS 12.5 ppg, 2.10 cu. ft./sx <u>150</u> sxs Cl "B" + 2% CaCl 15.6 ppg, 1.18 cu. ft./sx

**MUD PROGRAM**

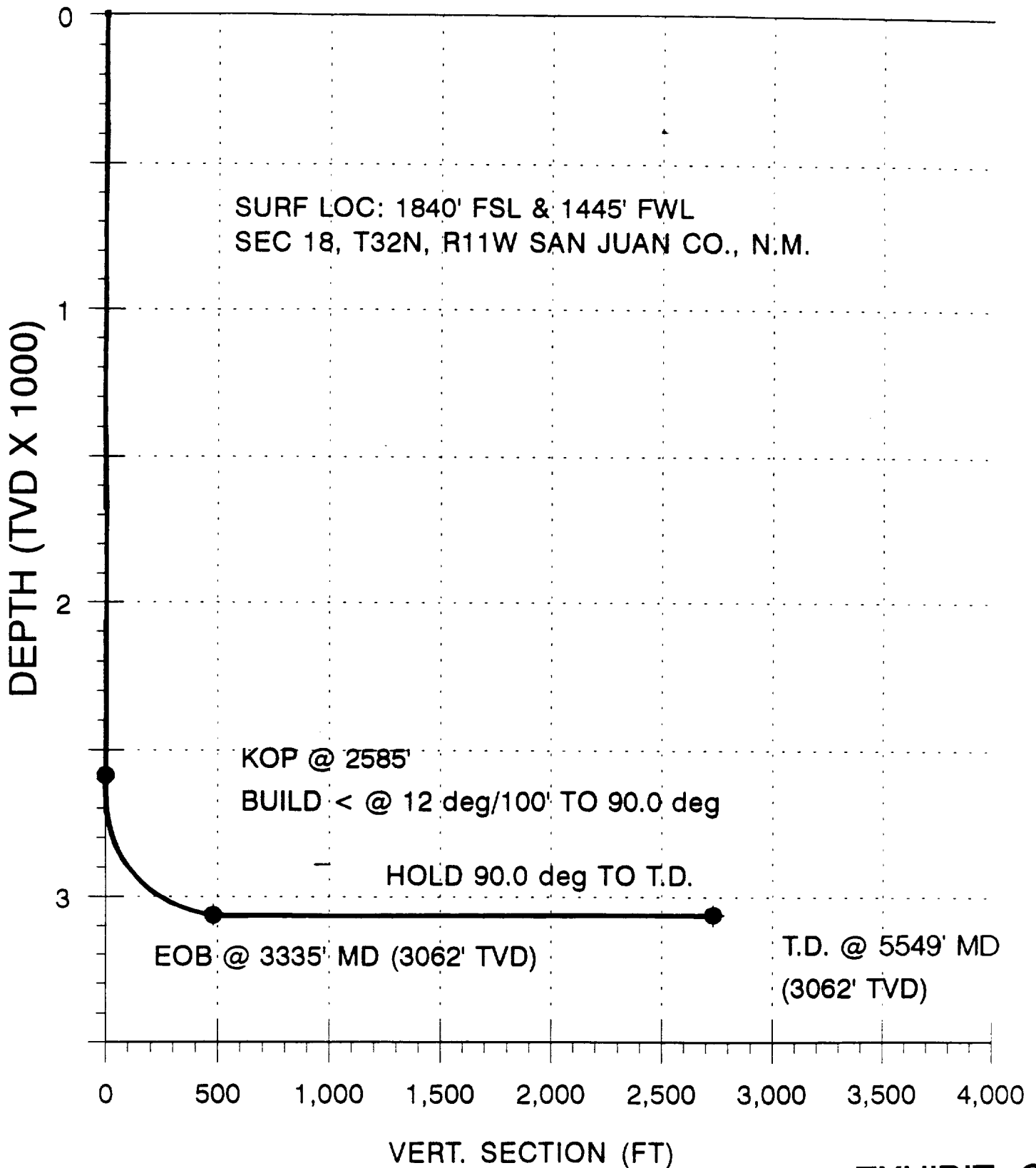
Interval	Mud Weight (lbs/gal)	Viscosity (secs)	Fluid Loss (cc)	Mud Type
0' - 250'	8.4 - 9.4	Native	N/C	Spud Mud
300' - 3335'	8.4 - 10.0	30 - 45	N/C	LSND/Polymer
3335' - 5549'	N/A	N/A	N/A	Air/Air-mist

The hole interval from 3335' MD (3062' TVD) to 5549' MD (3062' TVD) will be drilled using Air/Air-mist drilling. No DST's are planned. Mudlogging is planned below 500'. Plans are to complete the well as an open-hole completion in the Basal Seam of the Fruitland Coal formation.





# FC FED COM No 8R VERTICAL SECTION



# FC FED COM No. 8R HORIZONTAL PLAN

SURF LOC: 1840' FSL & 1445' FWL, SEC 18, T32N, R11W, San Juan Co., NM

