

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OTHER FOR APPROVAL  
OF COPIES REQUIRED  
(Other instructions on  
reverse side)

BLM Roswell District  
Modified Form No.  
NMO60-3160-2

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

3. ADDRESS OF OPERATOR  
10 Desta Dr. Ste 100W, Midland, TX 79705

4. LOCATION OF WELL (Report location clearly and in accordance with applicable regulations)  
At surface 910' FNL & 1100' FEL  
At proposed prod. zone BH: 790S/790E  
Fruitland Coal

5. LEASE ORIGINATOR AND SERIAL NO.  
SF 0780460

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT ASSIGNMENT NAME

8. FARM OR LEASE NAME  
Hughes B 3198

9. WELL NO.  
16R

10. FIELD AND POOL OR WILDCAT  
Basin Fruitland Coal 71629

11. SEC., T., R., OR S.E. AND SURVEY OR AREA  
A Sec. 20, T-29N, R-8W

12. COUNTY OR PARISH  
San Juan

13. STATE  
NM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE  
OIL CON. DIV. DIST. 3

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  
2538.01

17. NO. OF ACRES ASSIGNED TO THIS WELL  
E/ 320

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

19. PROPOSED DEPTH  
3120' TVD

20. ROTARY OR CABLE TOOLS  
Rotary

21. ELEVATION (Show whether DT, ST, OR, OR)

6550' GR

22. APPROX. DATE WORK WILL START  
5/1/94

PROPOSED CASING AND CEMENTING PROGRAM

HOLE SIZE	CASING SIZE	WEIGHT/FOOT	GRADE	THREAD TYPE	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	54.5 W	K-55	ST&C	250'	180 SXS
11"	8-5/8"	32 W	K-55	RIRC	3394'	520 SXS
7-7/8"	Open Hole				6508' 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, 100W WP, 1000W OP) natural gas pipeline will be layed from this well to the existing Hughes B #16 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-10069.

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. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and proposed and true vertical depths. Give blowout preventer program, if any.

24. SIGNED James W. Brown TITLE Sr. Conservation Coordinator DATE 4/20/94  
(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE JUN 22 1994  
CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_

APPROVED  
AS AMENDED

DISTRICT MANAGER

\*See Instructions On Reverse Side

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number <u>30-045-29142</u>		2 Pool Code 71629		3 Pool Name Basin Fruitland Coal	
4 Property Code 003198		5 Property Name Hughes B			6 Well Number 16 R
7 OGRID No. 005073		8 Operator Name Conoco Inc.			9 Elevation 6550

10 Surface Location

UL or lot no. A	Section 20	Township 29 N.	Range 8 W.	Lot Idn NMPM	Feet from the 910	North/South line North	Feet from the 1100	East/West line East	County San Juan
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11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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12 Dedicated Acres 320	13 Joint or Infill	14 Consolidation Code	15 Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16		5177.04'		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature <u>Jerry W. Hoover</u> Printed Name <u>Sr. Conservation Coordinator</u> Title <u>4/20/94</u> Date	
RECEIVED JUN 27 1994 OIL CON. DIV. DIST. 3		20		18 SURVEYOR CERTIFICATION 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. Date of Survey <u>1-27-94</u> Signature and Seal of Surveyor Certificate Number	
5162.52'		5240.40'			

## Hughes B No. 16R

SURFACE LOCATION: 910' FNL & 1100' FEL, Sec. 20, T-29N, R-8W

BOTTOM HOLE LOCATION: 790' FSL & 790' FEL, Sec. 20, T-29N, R-8W

### CASING AND CEMENTING PROGRAM

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MAY 16 1994

<u>Footage</u>	<u>Casing</u>	<u>Cement</u>	BUREAU OF LAND MANAGEMENT FARMINGTON DISTRICT OFFICE
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	
3394'	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.

EXHIBIT C.2

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.

RECEIVED

MAY 16 1994

BUREAU OF LAND MANAGEMENT  
FARMINGTON DISTRICT OFFICE

**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' - 3394'	8.4 - 10.0	30 - 45	N/C	LSND/Polymer
3394' - 6508'	N/A	N/A	N/A	Air/Air-mist

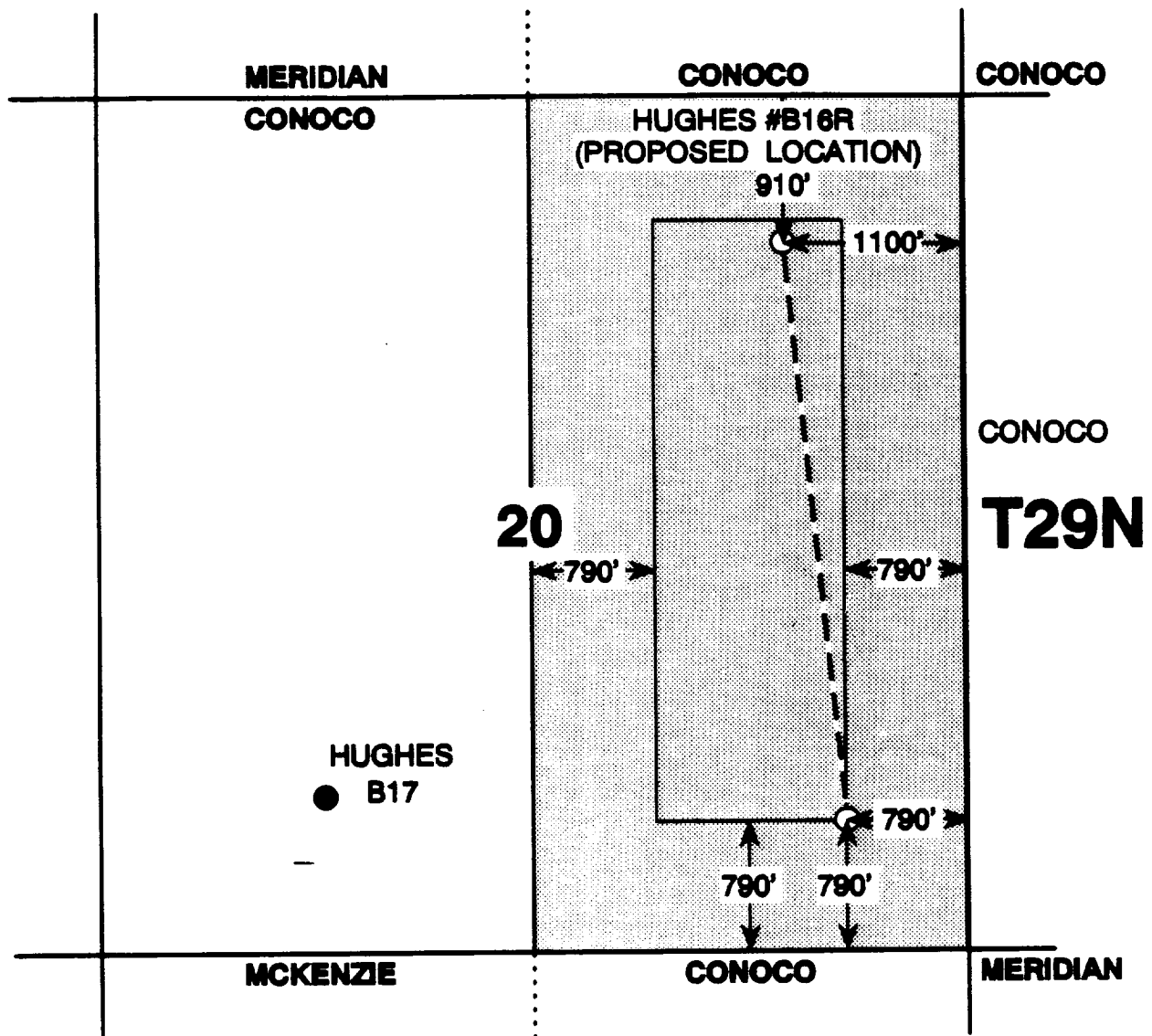
The hole interval from 3394' MD (3120' TVD) to 6508' MD (3109' TVD) will be drilled using Air/Air-mist drilling. No DST's are planned. Mudlogging is planned below 500'. Plans are to complete the well as an open-hole completion in the Basal Seam of the Fruitland Coal formation.



# PROPOSED HORIZONTAL FRUITLAND COAL WELL

## HUGHES #B16R

SURFACE LOCATION : 910'FNL 1100'FEL  
SECTION 20-T29N-R8W



**R8W**

**SAN JUAN CO., N.M.**

**EXHIBIT A.3**

**HUGHES B-16R  
SEC 20, T29N, R8W  
SAN JUAN COUNTY, NEW MEXICO**

Conoco proposes to drill the Hughes B-16R well as a directional/horizontal hole to 6508' MD (3109' 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  $\pm 3394'$  MD (3120' TVD) and 8-5/8" intermediate casing will be set. A 7-7/8" hole is planned to total depth of the well at  $\pm 6508'$  MD (3109' 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: 910' FNL & 1100' FEL Sec. 20-29N-8W

PBHL: 790' FSL (4490' FNL) & 790' FEL Sec. 20-29N-8W

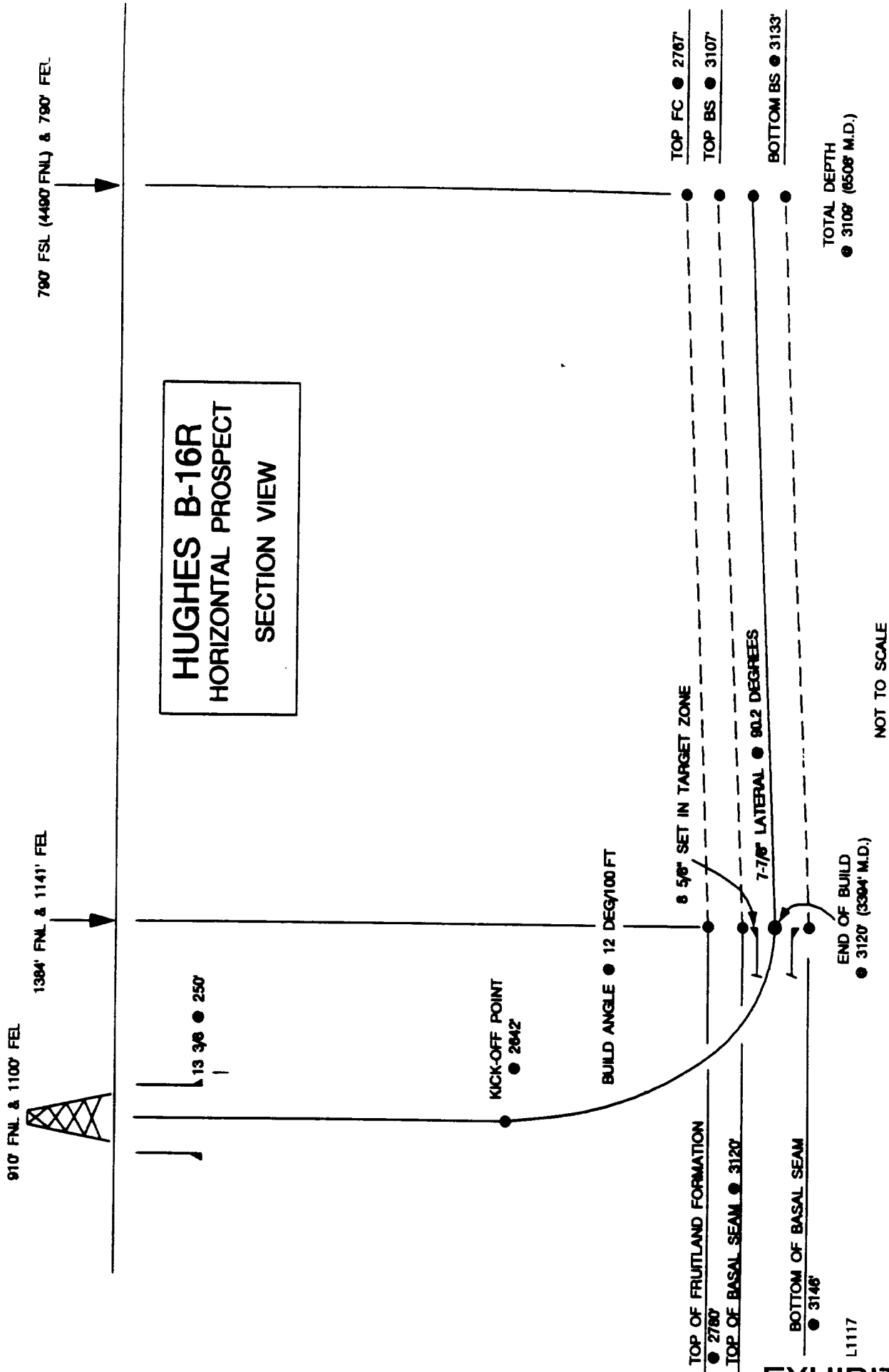
**CASING AND CEMENTING PROGRAM:**

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
3394'	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**

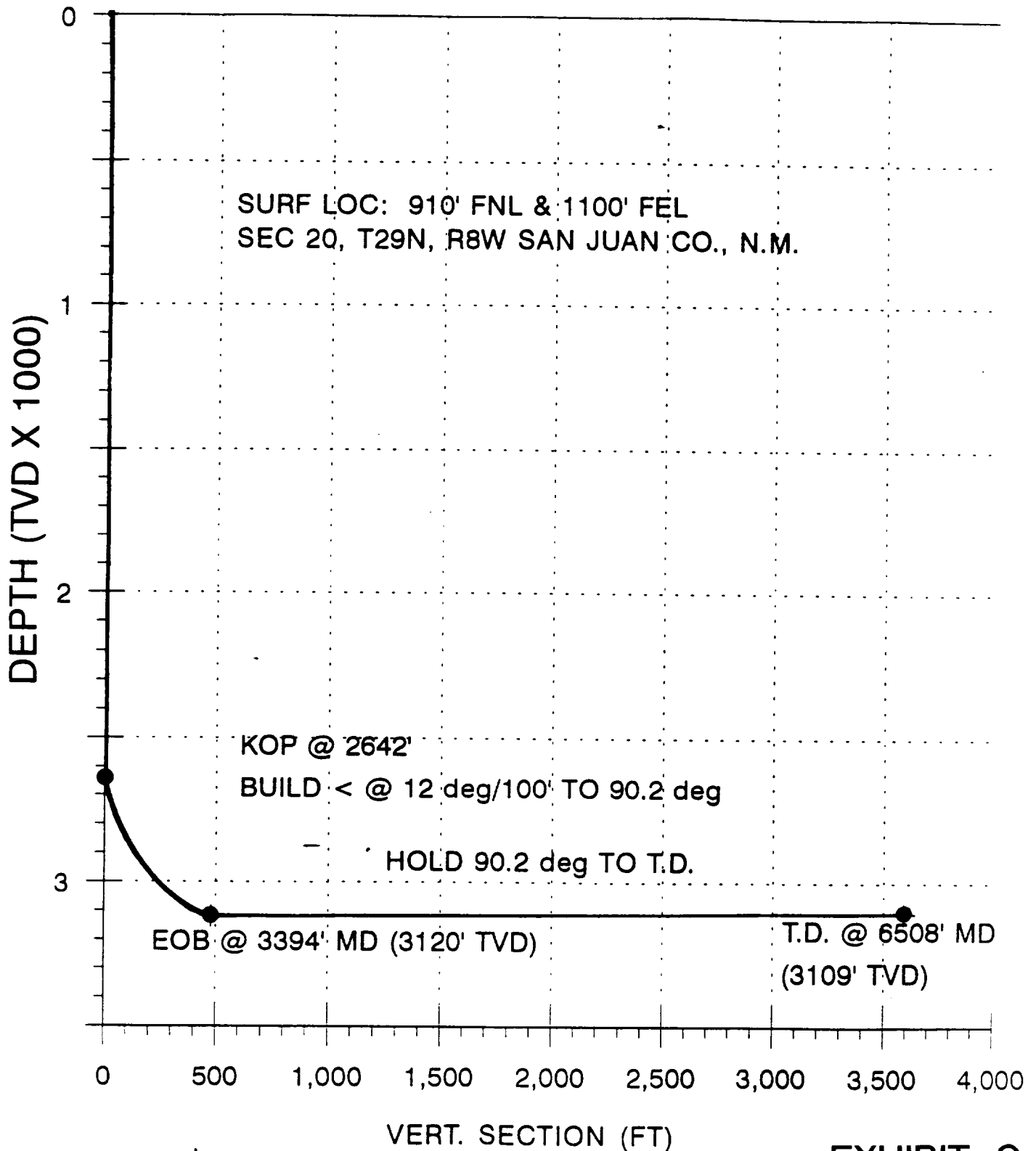
Interval	Mud Weight (lbs/gal)	Viscosity (secs)	Fluid Loss (cc)	Mud Type
0' - 250'	8.4 - 9.4	Native	N/C	Spud Mud
300' - 3394'	8.4 - 10.0	30 - 45	N/C	LSND/Polymer
3394' - 6508'	N/A	N/A	N/A	Air/Air-mist

The hole interval from 3394' MD (3120' TVD) to 6508' MD (3109' 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.





# HUGHES B-16R VERTICAL SECTION



# HUGHES B-16R HORIZONTAL PLAN

SURF LOC: 910' FNL & 1100' FEL, SEC 20, T29N, R8W, SAN JUAN CO., N.M.

