

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

30-045-28330

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. %Ron Hildenbrand

3. ADDRESS OF OPERATOR

3817 NW Expressway, Oklahoma City, OK 73112

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

1970' fnl & 410' fel (NE/4)

At proposed prod. zone

Fruitland Coal 1970 FNL & 1023 FEL

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

24 Mi. - Bloomfield, NM - NE

15. DISTANCE FROM PROPOSED*

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

410'

16. NO. OF ACRES IN LEASE

1920

17. NO. OF ACRES ASSIGNED
TO THIS WELL

E/2 320 Ac

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

19. PROPOSED DEPTH

3080'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4.

6395' GR

22. APPROX. DATE WORK WILL START*

When approved

23. PROPOSED CASING AND CEMENTING PROGRAM

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

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24#	250'	275 sx C1. G
7 7/8"	5 1/2"	15.5#	3080'	260 sx 35/65 Lite Poz

We propose to Directional Drill to a TD of 3080', and complete as a Fruitland Coal gas well. The proposed well plan outline, cementing program, C102, BOP diagram and the Directional Plan are attached.

RECEIVED

OCT 16 1990

OIL CON. DIV
DIST. 3

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 measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Ronald R. Heldenbrand

(This space for Federal or State office use)

TITLE

Manager-Safety, Regulatory &
Environmental Affairs

DATE Sept. 25, 1990

PERMIT NO.

APPROVAL DATE

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

*See Instructions On Reverse Side

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator CONOCO INC.			Lease HUGHES /A/		Well No. # 16
Unit Letter H	Section 28	Township 29 NORTH	Range 8 WEST	County SAN JUAN	
Actual Footage Location of Well: 1970 feet from the NORTH line and 410 feet from the EAST line					
Ground level Elev. 6395	Producing Formation Fruitland Coal		Pool Basin Fruitland Coal Gas		Dedicated Acreage: E/2 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.

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).

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.?

☐ Yes ☐ No If answer is "yes" type of consolidation

If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

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.

OPERATOR CERTIFICATION

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

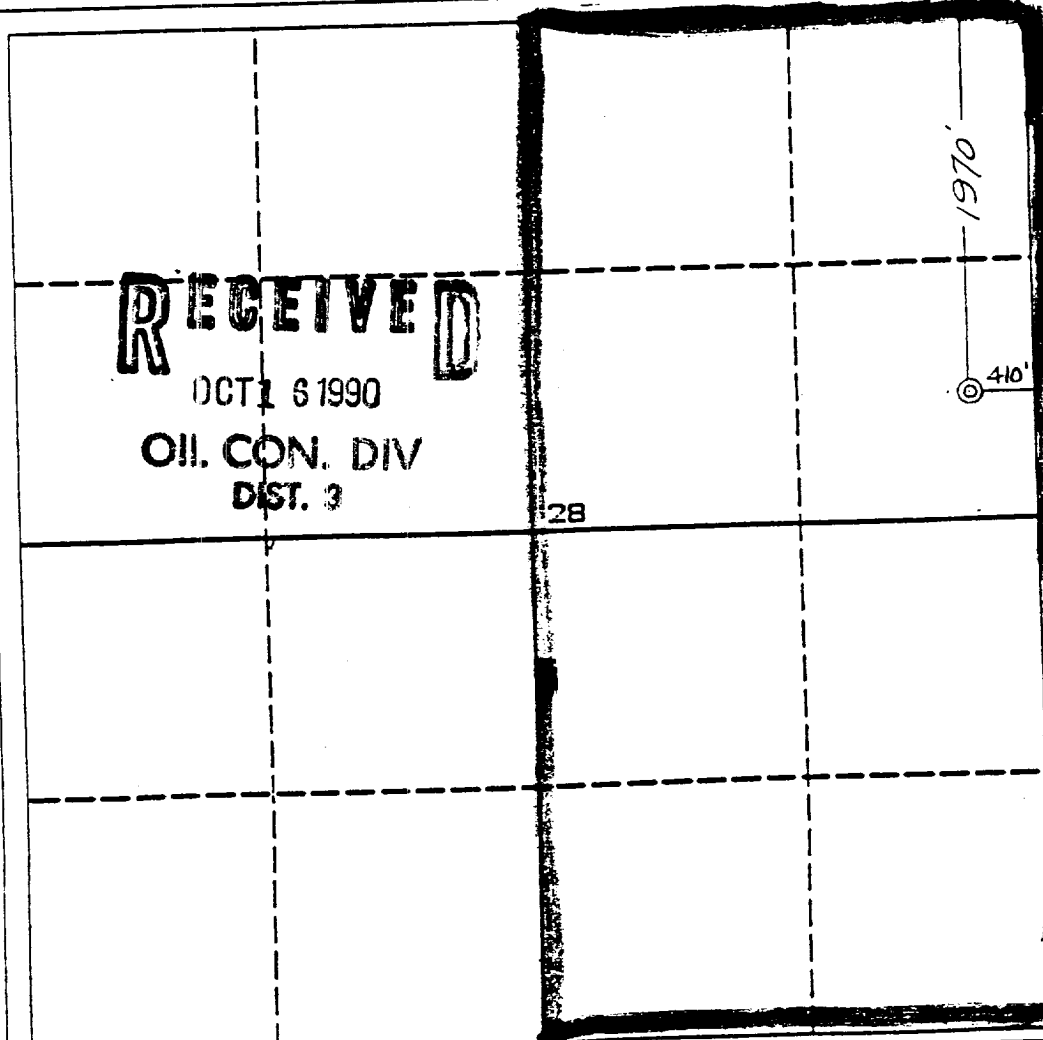
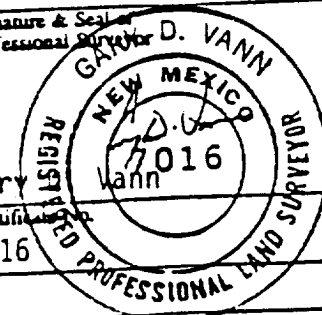
Signature
Ronald R. Hildenbrand
Printed Name
Ronald R. Hildenbrand
Position
Supervisor, Regulatory Environmental & Safety Affairs Company
Company
Conoco Inc.
Date
9/25/90

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes, 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.

Date Surveyed
May 7, 1990

Signature & Seal of Professional Surveyor
GARY D. VANN
7016
Certification
7016



RECEIVED

OCT 16 1990

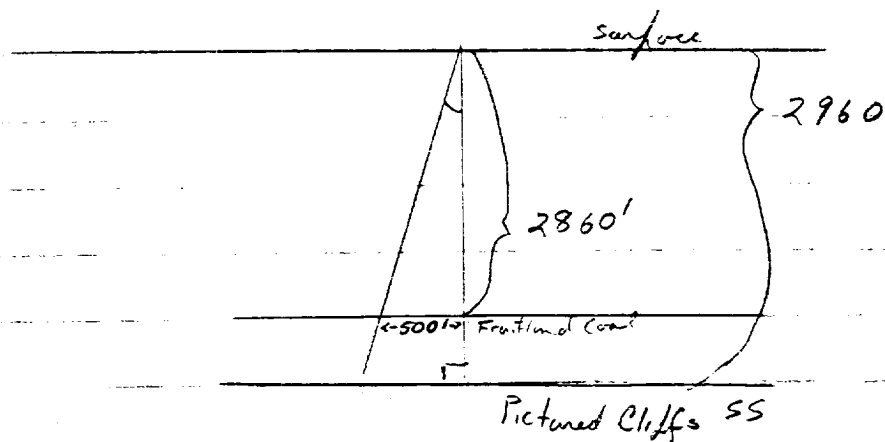
OIL CON. DIV
DIST. 3

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

Hughes A 16 NE/28 T 29N R 8W

- Needs to be deviated minimum 350' due west preferably 500' due west to center in legal drilling window.

		Vert depths
surface elevation	6400'	0'
(100' above PC) elevation, T/Fld coal	3540	2860
elevation T/PC 3430'	3490'	2960



Well: Hughes "A" #16
Lease: #SF 078049
NE/4 Sec. 28-T29N-R8W
San Juan Co., NM

Conoco Inc. proposes to drill the above well to further develop the Fruitland Coal reservoir. The well will be drilled to the surface casing point using native mud. The well will then be drilled to the total depth with a non-dispersed mud system. The attached modified 12-inch 3,000 psi blowout preventer will be used. (Please see attached BOP information) The well will be completed in the Fruitland Coal with a fracture stimulation.

<u>Quantity</u>	<u>Size</u>	<u>Weight</u>	<u>Description</u>
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250'	8 5/8"	24#	K55 ST&C
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Cementing: 200 sx "G" +2% CaCl₂ +
.25 lb/sk Polyflac 15.8 PPG

3080'	5 1/2"	15.5#	K55 ST&C
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Cementing: FIRST STAGE

LEAD: 75 sx 35/65 LitePoz +
6% (BWOB) DO20 +
10% (BWOW) DO44 +
12.4 PPG .25% (BWOB) DO65 +
12.5 lb/sk DO42 +
.25 lb/sk DO29

TAIL: 70 sx "G" + .5% (BWOC) DO59 +
15.9 PPG .2% (BWOC) D136 +
.4% (BWOC) DO65 +
.25% (BWOC) DO79

SECOND STAGE

185 SX 35/65 lite Poz +
6% (BWOB) DO20 +
12.4 PPG 10% (BWOB) DO44 +
.25% (BWOB) DO65 +
12.5 lb/sk DO42 +
.25 lb/sk DO29

The above casing design is based upon a 11.0 lb/gal mud weight.

EVALUATION

The following log surveys will be run:

FDC/GR/CAL, DIL/GR/SP, MICROLOG

Proposed Drilling Well - Plan Outline

Well Name: HUGHES A-16
 Location: NE 1/4 Sec. 28 - T29N - R4W

County: SAN JUAN
 State: NEW MEXICO
 Field: FOOTLAND SAL

Cumulative Rig Days	Meas. Depth	Formation Lithology Tops & Type	Drilling Problems	Type Of Formation Evaluation	Bit Size	Casing		Formation		Mud	
						Size	Setting Depth	Frac. Grad.	Pore Press.	Weight	Type
	200			NONE	12 1/4"	24" K-55 3 5/8"	250'			8.8-9.3	SRUD MUD
	400										
	600										
	800										
	1000										
	1200	SAN JOSE SANDS	POSSIBLE LOST CIRCULATION	NONE							
	1400										
	1600	OSB ALAMO	POSSIBLE LOST CIRCULATION								
	1800										
	2000	KIRTLAND SHALE								9.3-10.0	LSND
	2200										
	2400			1, 2, 3, 4							
	2600	FRUITLAND COAL	POSSIBLE GAS KICKS								
	2800	PICTURES CLIFFS				K-55 15.5"					
	3000	TD 3000'		1 MUDLOG 2 FIDUCIAL 3 MUDLOG 4 MUDLOG	7 7/8"	5 1/2"	3000'				

Date: 7/31/90
 Approved: _____
 Division Manager

Prepared By: ERIC P. DAVIS
 Division Engineer

Division Drilling Superintendent

ATTACHMENT TO FORM 9-331 C
APPLICATION FOR PERMIT TO DRILL

CONOCO INC.

NE/4 **WELL:** HUGHES A-16
SECTION: 28-T29N-R8W
COUNTY: San Juan, NM

1. The estimated tops of important geologic markers are shown on the attached Proposed Well Plan Outline.
2. The estimated depths at which anticipated water, oil, gas or other mineral-bearing formations to be encountered are shown on the attached Proposed Well Plan Outline.
3. A drawing of an API Series 900 Blowout Preventer Specification is attached. Pipe rams and blinds will be checked to the working pressure of the stack of 70% of the minimum internal yield strength of the casing whichever is less. BOPD will be checked when casing string is set.
4. The proposed casing program is as follows:

0'-250'	8 5/8"	24#	K-55
0'-3080'	5 1/2"	15.5#	K-55

5. The proposed mud program is as follows:

0'-250'	Spud Mud
250'-1500'	Water-Gel
1500'-3080'	Low Solid Non Dispensed

6. Run open-hole logs from 1500-TD. The log suite will include the following: FDC/GR/CAL, Microlog, DIL/SP/GR.
A temperature survey will be run to determine the top of cement on each casing string where cement is not circulated.

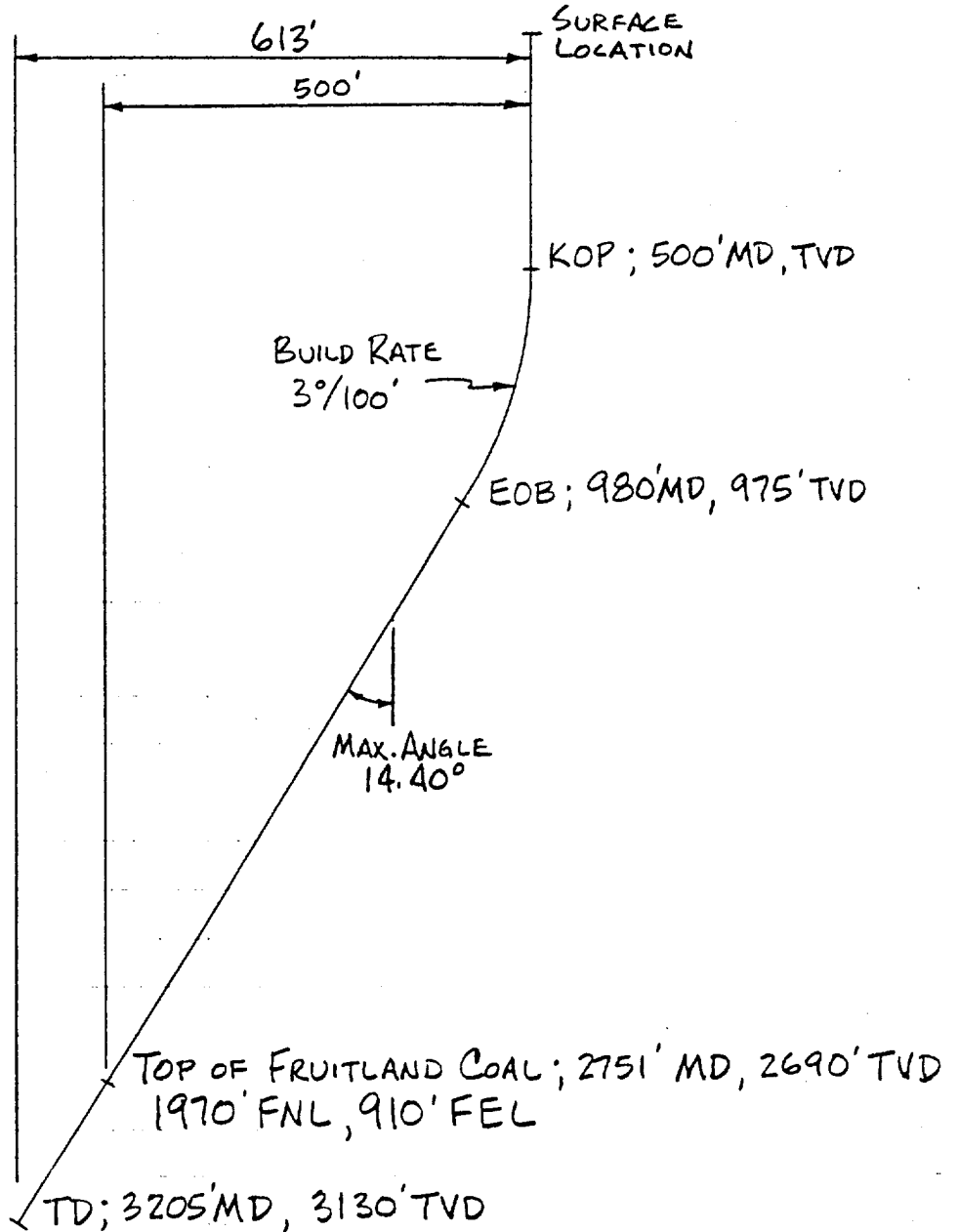
7. Possible lost circulation in San Jose Sands 1000'-1300'
Possible lost circulation in Ojo Alamo 1800'-2200'
Straight-Hole No Deviation

8. The anticipated starting date is When Permitted with a duration of approximately 7 days ~~including cable tool~~

PRELIMINARY DIRECTIONAL PLAN HUGHES A-16

1970' FNL 1023' FEL 613' DUE WEST SURFACE LOCATION 1970' FNL 410' FEL

FORMATION	MD	TVD
O. ALAMO	1811'	1780'
KIRTLAND	2121'	2080'
FRUITLAND	2751'	2690'
P. CLIFFS	3050'	2980'
TD	3205'	3130'



NOT TO SCALE

Conoco Inc.
Calculation Sheet

Made By **RVB**
Checked By
Date **8-30-90**
Page of

Title

Job No.
Field
State

PRELIMINARY DIRECTIONAL PLAN
HUGHES A-16

SURFACE LOCATION:
1970' FNL, 410' FEL
SECTION 28, T29N, R08W

DIRECTIONAL OBJECTIVE:

1970' FNL, 910' FEL (500' OF DISPLACEMENT)
TOP OF FRUITLAND COAL @ 2690' TVD
KOP @ 500' MD (TVD)
BUILD RATE = $3^{\circ}/100'$
MEASURED DEPTH (SEE CONDRILL PRINTOUT) = 3205

BOTTOM HOLE LOCATION (SEE CONDRILL PRINTOUT):

1970' FNL, 1023' FEL
MEASURED DEPTH = 3205'
TRUE VERTICAL DEPTH = 3130'
TOTAL DISPLACEMENT = 613'

CONOCO

Version 1.00

Thu Aug 30 10:44:18 1990

CONDFILL - DIRECTIONAL PROPOSAL - 1 TARGET
Filename: hughes

Depth & Distances	TVD. ft	MD. ft	Diso. ft
	*****	*****	*****
Kickoff point	500'	500'	0'
Elemt Start	975	980'	60'
Target	2690	2751	500'

Angles	Angle. deg

Tie-in	0.000
Build	3.000
Elemt	14.389
Drop	0.000

Azimuth Tie-in to Target 270.0

Listed below are the input parameters:

Kickoff Point:

Depth, TVD = 500 ft
Angle = 0.00 degrees

Build rate = 3.00 deg/100 ft
Drop rate = 0.00 deg/100 ft

Target:

Depth, TVD = 2690 ft
Coordinates - 0 ft North and 500 ft West

CONOCO

Version 1.00

Thu Aug 30 10:43:28 1990

CONDFILL - DIRECTIONAL PROPOSAL - POINTS ON THE WELL PATH
Filename: hughes

TVD, ft	MD, ft	Disp, ft	Angle, deg	Rectangular Coordinates	
				North/South	East/West
1750(O. ALAMO)	1511	267	14.789	0 South	267 West
2080(KIRTLAND)	2121	344	14.789	0 South	344 West
2590(FRUITLAND)	2751	500	14.789	0 South	500 West
3280(P. CLIFFS)	3050	574	14.789	0 South	574 West
3770(TD)	3305	613	14.789	0 South	613 West

Listed below are the input parameters:

Kickoff/Tie-in Point:

Depth, TVD = 500 ft
Depth, MD = 500 ft
Angle = 0.00 degrees

Build rate = 3.00 deg/100 ft
Drop rate = 0.00 deg/100 ft

Target:

Depth, TVD = 0 ft

