

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM-16139
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR Meridian Oil Inc.		7. UNIT AGREEMENT NAME
3. ADDRESS OF OPERATOR 21 Desta Drive, Midland, Texas 79705		8. FARM OR LEASE NAME Pitchfork "4" Federal
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 1830' FSL & 1980' FWL, Sec. 4, T-25-S, R-34-E At proposed prod. zone		9. WELL NO. 2
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 24 miles southwest of Jal, New Mexico		10. FIELD AND POOL, OR WILDCAT Pitchfork Ranch (Atoka)
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drg. unit line, if any) 1830'	16. NO. OF ACRES IN LEASE 320	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 4, T-25-S, R-34-E
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 150'	19. PROPOSED DEPTH 14,100'	12. COUNTY OR PARISH Lea
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3361' GR		13. STATE N.M.
20. ROTARY OR CABLE TOOLS Rotary		17. NO. OF ACRES ASSIGNED TO THIS WELL 320
22. APPROX. DATE WORK WILL START* 4-4-88		

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	54.5#	600'	650 sx. Circulate
12 1/4"	9 5/8"	36#	5100'	2200 sx. Circulate
8 3/4"	7"	29 & 32#	13,300'	1700 sx. TOC @ + 5000'.
6"	4 1/2"	15.1#	12,900-14,100'	300 sx. Liner Top.

Drill 17 1/2" hole & set 13 3/8" csg @ 600'. Circ cmt. Drill 12 1/4" hole & set 9 5/8" csg @ 5100'. Circ cmt. Drill 8 3/4" hole & set 7" csg @ 13,300'. Circ cmt up to 5000'. Drill 6" hole & set 4 1/2" liner from 14,100' to 12,900'. Complete in Atoka thru single string of 2 7/8" tbg & PBR set in top of liner.

MUD PROGRAM: 0-600' spud mud; 600-5100' brine; 5100-13,300' cut brine; 13,300-13,600' brine; 13,600-TD water based mud. MW 11-13.5, VIS 50-80, BHP @ TD expected to be 9600 psi.

BOP PROGRAM: 13 5/8"-5M annular BOP to be installed on 13 3/8" csg. 11"-10M BOP stack to be installed on 9 5/8" and left on for remainder of drilling. Stack to consist of drilling head, annular BOP, blind ram BOP and two pipe ram BOP's. Test BOP's after setting 9 5/8" & 7" csg with an independent tester.

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 Cathy Nokes TITLE Operations Tech III DATE 2/19/88
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE 3-23-88
CONDITIONS OF APPROVAL, IF ANY: _____

*See Instructions On Reverse Side

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-1C2
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator MERIDIAN OIL COMPANY			Lease PITCHFORK "4" FEDERAL		Well No. 2
Unit Letter K	Section 4	Township 25-SOUTH	Range 34-EAST	County LEA	
Actual Footage Location of Well:					
1830 feet from the SOUTH line and		1980 feet from the WEST line			
Ground Level Elev. 3361	Producing Formation Atoka		Pool Pitchfork Ranch	Dedicated Acreage: 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 interests 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 interests, has been approved by the Commission.

MERIDIAN OIL INC. 16139 U.S.	MERIDIAN OIL 16139 U.S. MI	HNG 1284 U.S. MI E. R. MADERA
MERIDIAN OIL INC. 16139 U.S.	MERIDIAN OIL INC. 16139 U.S.	U.S.

1980'

1830'

CERTIFICATION	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
Name Cathy Nokes	
Position Operations Tech III	
Company Meridian Oil Inc.	
Date 2/26/88	
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.	
Date Surveyed FEBRUARY 10, 1988	
Registered Professional Engineer and/or Land Surveyor	
Certificate No. 6689	

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MERIDIAN OIL INC.

Pitchfork "4" Federal No. 2
1830' FSL & 1980' FWL
Sec. 4, T-25-S, R-34-E
Lea County, New Mexico
NM-16139

To supplement USGS Form 3160-3 Application to Drill the following additional information is submitted concerning questions on Page 5 of NTL-6:

1. See Form 3160-3.
2. See Form 3160-3.
3. The geological name of surface formation is: Ochoa
4. See Form 3160-3.
5. See Form 3160-3.
6. The estimated tops of important geological markers are:

Rustler	1050'	Wolfcamp	12,700'
Salt	5020'	Strawn	13,725'
Delaware Sand	5200'	Upper Atoka Sand	13,950'
Bone Spring	9400'		

7. The estimated depths at which anticipated water, oil, gas and mineral bearing strata are as follows:

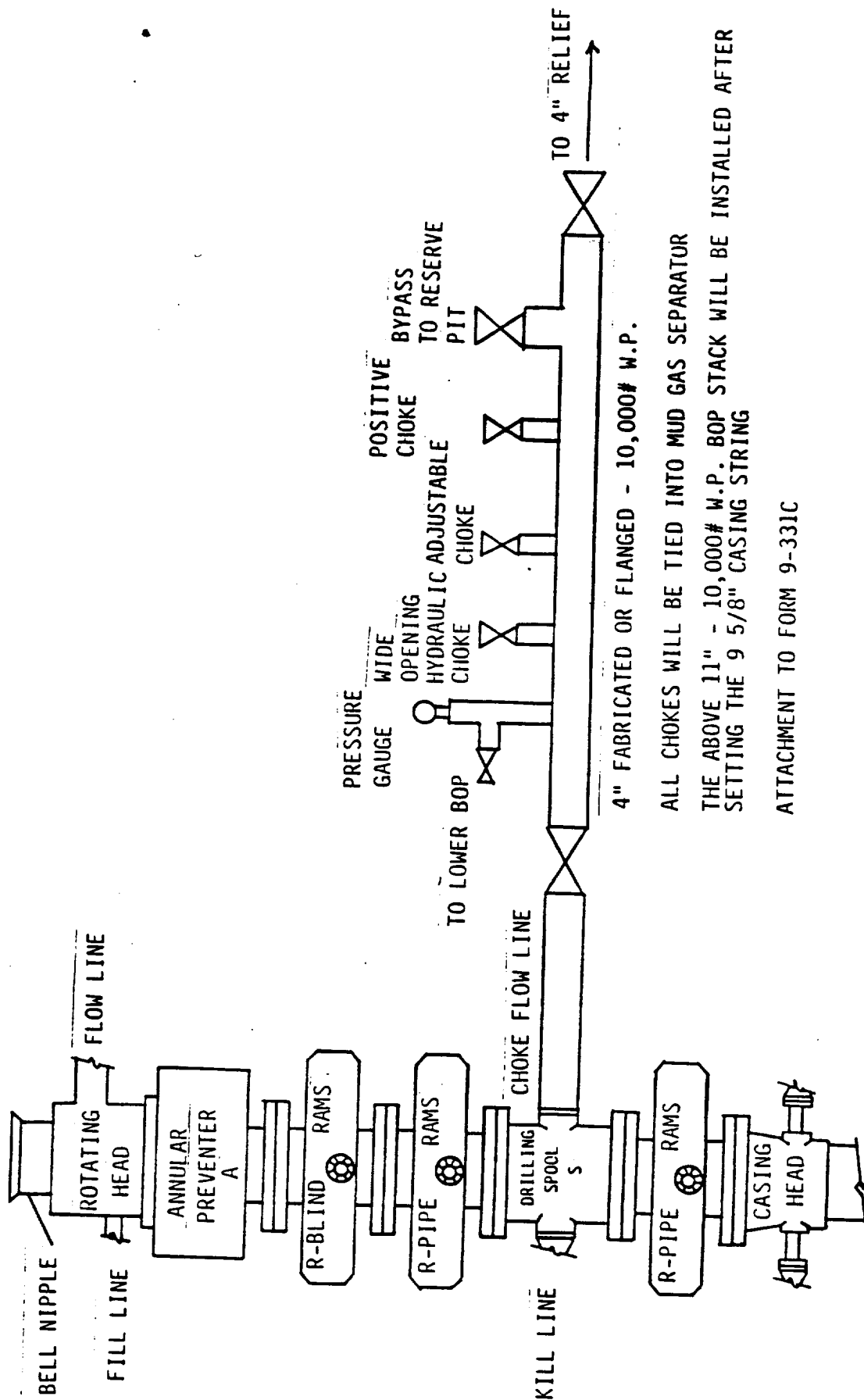
Wolfcamp	12,700' - Oil
Upper Atoka Sand	13,950' - Gas

8. See Form 3160-3. All casing will be new.
9. See Form 3160-3 for depths of strings. Cement volumes and additions as follows:
 - a. 13 3/8" csg: Cement w/500 sxs Lite "C" cmt and tail in w/150 sx Cl "C" cmt.. Circ to surface.
 - b. 9 5/8" csg: Cement w/1700 sxs Lite "C" cmt w/15# salt and tail in w/500 sxs Cl "C" cmt. Circ to surface.
 - c. 7" csg: Cement w/1200 sxs Lite "H" and 500 sxs Cl "H" Neat. TOC @ 5000'.
 - d. 4 1/2" liner: Cement w/300 sx Cl "H". Circ to top of liner.

A caliper log will be run prior to setting 7" & 4 1/2" pipe to determine exact cement volumes required.

10. The pressure control diagram is attached to Form 3160-3. The following additional information is as follows:

13 3/8" casing installation: 13 5/8"-5M annular BOP tested to 1000 psi for 30 minutes before drilling out 13 3/8" casing shoe.



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