1a. TYPE OF WORK       DRI         b. TYPE OF WELL       OIL         OIL       OA         WELL       WI         2. NAME OF OPERATOR       Meridian Oil	DEPARTMENT BUREAU OF I FOR PERMIT T	LAND MANAG		(Other instruction reverse state)	ACK	Form approved. Budget Bureau I Expires August. 5. LEASE DEBIGNATION . NM-16139 6. IF INDIAN, ALLOTTER 7. UNIT AGREEMENT N. 8. FARM OR LEASE NAM Pitchfork "4" 9. WELL NO. 2	No. 1004-0136 31, 1985 AND MERIAL NO. OR TRIBE NAME	
4. LOCATION OF WELL (Re At SULACE 1830 <sup>†</sup> At proposed prod. some 14. DISTANCE IN MILES A	FSL & 1980' FWL	in accordance wit, Sec. 4, T	2-25-	S, R-34-E		<ol> <li>FIELD AND POOL, O Pitchfork Ran</li> <li>BEC., T., E., M., OF H AND SUBVEY OR AND Sec. 4, T-25-</li> <li>COUNTY OF PARISH</li> </ol>	nch (Atoka) LK. -S, R-34-E	
24 miles sout 15. DISTANCE FROM PROPORE LOCATION TO NEAREST	hwest of Jal, No BED®	ew Mexico	16. NO	. OF ACRES IN LEASE		Lea	N.M.	
PROPERTY OR LEASE LI (Also to nearest drig. 18. DISTANCE FROM PROFO	unit line, if any)	30'	19 PH	320		TO THIS WELL		
TO NEAREST WELL, DR OR APPLIED FOR, ON THE	ILLING, COMPLETED,	150'		4,100'	Rota	TARY OR CABLE TOOLS		
21. ELEVATIONS (Show when 3361' GR	ther DF, RT, GR, etc.)				·	22. APPROX. DATE WO 4-4-88	RE WILL START*	
23.		PROPOSED CASI	NG ANI	CEMENTING PROGRA	vi			
SIZE OF HOLE	BIZE OF CASING	WEIGHT PER F	00T	SETTING DEPTH		QUANTITY OF CEMEN	T	
17 1/2"	13 3/8"	54.5#				sx. <u>Circulate</u>		
<u>    12  1/4''                                 </u>	<u> </u>	<u>36#</u> 29 & 32#		<u>5100'</u> 13,300'		200 sx. <u>Circulate</u> 700 sx. <u>TOC @</u> + 5000'.		
6"	4 1/2"	15.1#		2,900-14,100'		300 sx. <u>100 @ + 5000</u> . 300 sx. Liner Top.		
csg @ 5100'. Drill 6" hold single string <u>MUD PROGRAM</u> : brine; 13,600- <u>BOP PROGRAM</u> : stack to be in of drilling 1	hole & set 13 Circ cmt. Dril & set 4 1/2" 1 of 2 7/8" tbg 0-600' spud mu TD water based 13 5/8"-5M ann stalled on 9 5/ mead, annular BC 3" & 7" csg with	1 8 3/4" h iner from & PBR set d; 600-510 mud. MW 11 mular BOP t '8" and lef DP, blind r	ole 8 14,10 in to 0' bi -13.2 o be t on am B0	x set 7" csg @ 00' to 12,900'. op of liner. rine; 5100-13,3 5, VIS 50-80, B installed on 1 for remainder DP and two pipe	13,300' Compl 00' cut HP @ TD 3 3/8" of dril	. Circ cmt up ete in Atoka t brine' 13,300 expected to h csg. 11"-10M ling. Stack t	b to 5000'. chru -13,600' be 9600 psi. BOP: to consist	
IN ABOVE SPACE DESCRIBE zone. If proposal is to preventer program, if any 24. SIGNED	drill or deepen directiona r. hy Mohe:	proposal is to deep lly, give pertinent	t data (	olug back, give data on p on subsurface locations an perations Tech	nd measured	and true vertical depth	s. Give blowout	
(THIS SPACE FOR FEDE	ral or State office use)							
PERMIT NO.				APPROVAL DATE			5 2 67/	
APPROVED BY COND <b>ITIONS</b> OF APPROV	AL, IF ANY :	TI1	"LE			DATE	23.88	

## \*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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

Interesting and the from the neutron barriers of the Section.         MERIDIAN OIL COMPANY       Vol No. 2         MERIDIAN OIL COMPANY       Vol No. 2         Interesting a decimant of the Section of Weil No. 2         County       LEA         Actoba       Total county       Lea         Solution to actoba county       Load         Actoba       Total county       Lea         Actoba       Actoba       Actoba         Actoba       County       List the count count colspan="2">County <th colspa<="" th=""><th></th><th></th><th>WELL LOCATION A</th><th></th><th></th><th></th><th>.AT</th><th>Form C-162 Supersedes C-128 <b>Effec</b>tive 1-1-65</th></th>	<th></th> <th></th> <th>WELL LOCATION A</th> <th></th> <th></th> <th></th> <th>.AT</th> <th>Form C-162 Supersedes C-128 <b>Effec</b>tive 1-1-65</th>			WELL LOCATION A				.AT	Form C-162 Supersedes C-128 <b>Effec</b> tive 1-1-65
MERIDIAN OLL COMPANY         Listes         PITCHFORK '4" FEDERAL         2           Junt Later         Sector         4         Tominhip         Canadian of the sector			Ail distances must be	from the os	iter boundaries of	f the Section			
MERIDIAN OIL COMPANY         PITCHFORK '4' FEDERAL         2           Unit Letter         A         28-50UTH         Heaver         Commity         LEA           Arrent         Section         Township         28-50UTH         Heaver         Commity         LEA           Arrent         South or the actroage addicated to the subject well by colored panell or hachure marks on the plat below.         Patchfork Ranch         Patchfork Ranch         Arrent           1. Outline the actroage addicated to the well, outline each and identify the ownership thereof (both as to working interest and reyalty).         If more than one lease is dedicated to the well, autline each and identify the ownership thereof (both as to working interest and reyalty).           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-puoling, ctc?           Yes         No         Hasswer is 'yes,' type of consolidation           If answer is 'no,'' is the owners and treat descriptions which have actually been consolidated. (Use reverse side of this form in discussion).           No ullowable will be assigned to the well until all interests have been consolidated (Up communitization, unitization, 16139           If answer is 'no,'' is the owners and treat descriptions which have actually been consolidated. (Use reverse side of this form indication, unitization, 16139           U.S. MI         HNC               If answer is 'no,'' is a non-indu	•							Well No.	
A         Description         Description <thdescription< th=""> <thdescription< th=""> <thdescri< td=""><td></td><td></td><td></td><td></td><td>PITCHFORK</td><td>"4" FEDE</td><td>ERAL</td><td></td></thdescri<></thdescription<></thdescription<>					PITCHFORK	"4" FEDE	ERAL		
Actual Protocols     Universe Locking of Will     Universe in the set of t		Section	Township	Han	40	County			
1830         two items is SOUTH         ite and item item         WEST         item           3361         Atoka         Patchfork Ranch         Detrout develop Aromanes         Acres           3361         Atoka         Patchfork Ranch         Detrout develop Aromanes         Acres           1. Outline the acrenge dedicated to the subject well by colored puncil or hachure marks on the plat below.         1. 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 to the well or consolidation			25-SOUTH		34-EAST		LEA		
Stream Line         Producting formation         Path Provide the set of the set		ation of Well:							
3361     Atoka     Pitchfork Ranch     Design Acressing Acrespand Acressing Acress				· · · · · · · · · · · · · · · · · · ·	<u>30 in</u>	nt from the	WEST	line	
Aver     Aveve     Aveve     Avever     Aver     Aver     Aver     Aver     Ave			mailon		bfork Bong	h		Dedicated Acreage:	
If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).     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 in necessary)     No allowable will be assigned to the well will all interests have been consolidated. (Use reverse side of this form in necessary)     No allowable will be assigned to the well will all interests have been consolidated. (Use reverse side of this form in eccessary)     No allowable will be assigned to the well will all interests have been consolidated. (Use reverse side of this form in eccessary)     No allowable will be assigned to the well will all interests. have been consolidated. (Use reverse side of this form in eccessary)     No allowable will be assigned to the well will all interests. have been consolidated. (Use reverse side of this form in eccessary)     No allowable will be assigned to the well will all interests. have been approved by the Commission.      NERIDIAN OIL INC.     16139     U.S. MI     HERIDIAN OIL HNC     16139     U.S. MI E. R. MADERA     MERIDIAN OIL INC.     16139     1284     16139     1284     16139     16139     1284     16139     1284     16139     1284     16139     1284     16139     1284     16139     1284     16139     1284     16139     1284     16139     1284     16139     1284     16139     1284     10.5.     10.5.     10.5.     10.5.     10.5.     10.5.     10.5.     10.5.     10.5.     10.5.     10.5.     10.5.     10.5.			ted to the subject w	I				Acros	
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 in accessary.)         No ullowable will be assigned to the well until all interests have been consolidated (by communitration, unitration, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.         MERIDIAN OIL INC.       MERIDIAN OIL HNG         16139       U.S. MI         U.S. MI       U.S. MI         U.S. MI       MERIDIAN OIL HNG         16139       1284         U.S. MI       MERIDIAN OIL HNG         16139       1284         U.S. MI       Cathy Nokes         Pastion       Cathy Nokes         Pas	2. If more th interest an	an one Icase is d royalty).	dedicated to the wel	l, outline	e each and ide	entify the o	ownership th	ereof (both as to working	
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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
- See Form 3160-3.
   See Form 3160-3
- 5. See Form 3160-3.
- The estimated tops of important geological markers are:

Rustler		Wolfcamp	12,700'
Salt		Strawn	13,725'
Delaware Sand		Upper Atoka Sand	13,950'
Bone Spring	9400'	opper Atoka Sanu	13,950

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/<u>1</u>200 sxs Lite "H" and 500 sxs C1 "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.





