

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL ☒ DEEPEN ☐ PLUG BACK ☐		5. LEASE DESIGNATION AND SERIAL NO. L.C. 063458
b. TYPE OF WELL OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE ZONE ☐ MULTIPLE ZONE ☒		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR CONTINENTAL OIL COMPANY		7. UNIT AGREEMENT NAME NMFU
3. ADDRESS OF OPERATOR P.O. Box 460 Hobbs, N.M. 88240		8. FARM OR LEASE NAME WARREN UNIT
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 1980' FNL + 660' FWL At proposed prod. zone SAME		9. WELL NO. 67
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*		10. FIELD AND POOL, OR WILDCAT UNDESIGNATED BLINEBRY AND TUBB
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE 1920	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SEC. 25 T20S R38E
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	19. PROPOSED DEPTH 6900'	12. COUNTY OR PARISH LEA
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3565.7' GR	20. ROTARY OR CABLE TOOLS ROTARY	13. STATE N.M.
23. PROPOSED CASING AND CEMENTING PROGRAM		22. APPROX. DATE WORK WILL START* MAY 14, 1979

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	9 5/8"	32.3 #	1600'	600 SK
8 3/4"	7"	23 # + 26 #	6900'	1525 SK

IT IS PROPOSED TO DRILL A STRAIGHT HOLE TO A TD OF 6900' AND COMPLETE AS
A dual BLINEBRY AND TUBB OIL WELL

SEE ATTACHMENT FOR 10 POINT WELL PLAN

SEE ATTACHED FOR 13 POINT SURFACE USE PLAN

DRILLING OPERATIONS AUTHORIZED AREA
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

RECEIVED
JAN 12 1979
U. S. GEOLOGICAL SURVEY
HOBBS, NEW MEXICO

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 Wm. A. Butterfield TITLE ADMINISTRATIVE SUPERVISOR DATE 1-11-79
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____
CONDITIONS OF APPROVAL, IF ANY:

USGS 6
NMFU 4
FILE 1
JFB REL 1

*See Instructions On Reverse Side

APPROVED
AS AMENDED

JAN 23 1979
James F. Sims
JAMES F. SIMS
DISTRICT ENGINEER

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

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

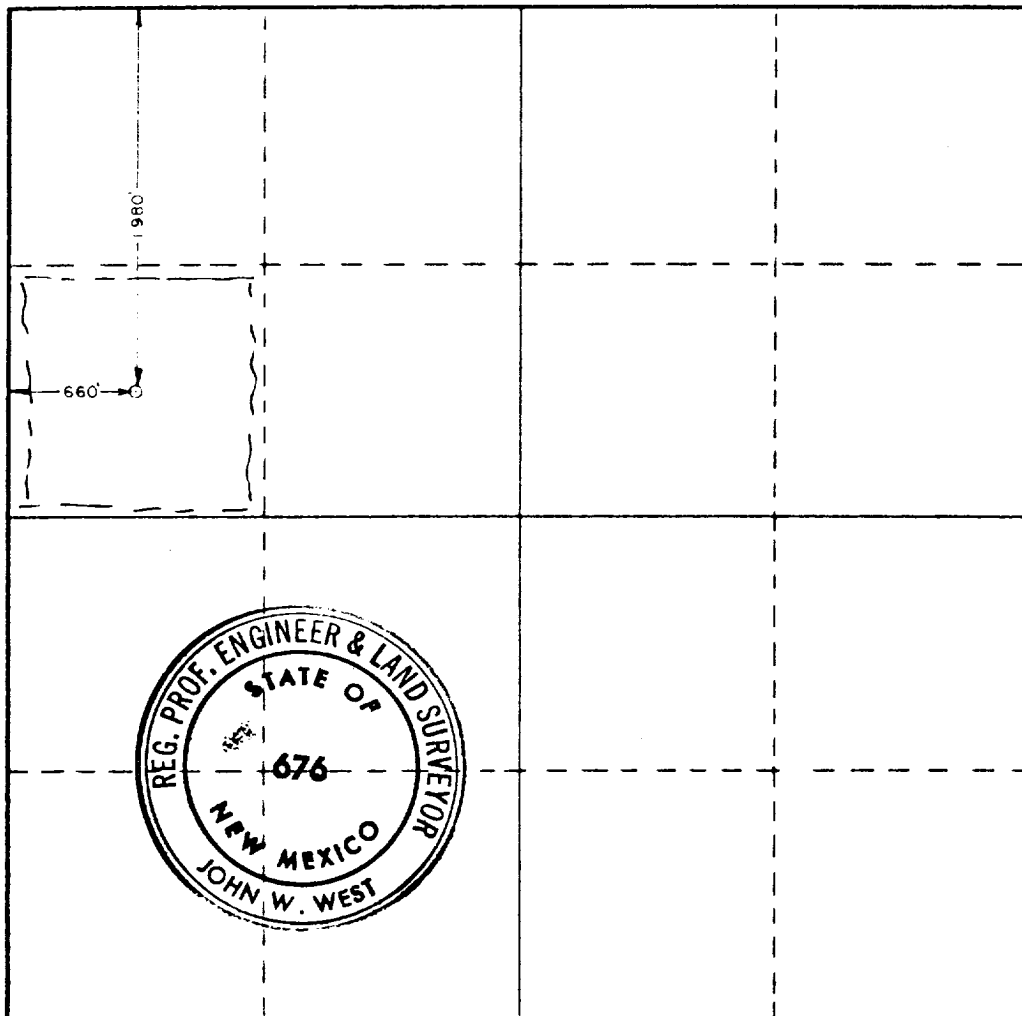
Operator Continental Oil Co.			Lease Warren Unit		Well No. 67
Unit Letter E	Section 25	Township 20 South	Range 38 East	County Lea	
Actual Well Location of Well:					
1980		feet from the North		line and 660 feet from the West line	
Ground Level Elev. 3565.7	Producing Formation Blind Canyon + Tubb		Pool NW 1/4	Dedicated Acreage: 40 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.



CERTIFICATION

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

Name John W. West
Position Administrative Supervisor
Company Continental Oil Co.
Date 1-11-79

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
November 10, 1978

Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No. **John W. West 676**

Ronald J. Eidson 3239

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600

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

Continental Oil Company
Warren Unit Nos. 62-69
T20S R38E
Lea County, New Mexico

1. The geologic name of the surface formation is pliestocene.
2. The estimated tops of important geologic markers are shown on the attached Proposed Well Plan.
3. The estimated depths at which anticipated water, oil, gas or other mineral-bearing formations to be encountered are shown on attached Proposed Well Plan.
4. The proposed casing program is as follows:

0' - 1600'	9 5/8", 32.3#, H-40, ST&C
0' - 5800'	7", 23#, K-55, ST&C
5800' - 6900'	7", 26#, K-55, ST&C
5. A drawing of an API Series 900 Blowout Preventer Specification is attached. Pipe rams and blinds will be checked to 1,000 PSI for 30 minutes when BOP is installed. BOP will be checked when casing string is set and operated daily for checks.
6. The proposed mud program is as follows:

0' - 1600'	8.5 - 9.0 ppg	spud mud
1600' - 6900'	9.0 - 10.0 ppg	saltwater gel
7. The auxiliary equipment to be used is:
 - (1) kelly cocks
 - (2) floats at the bit
8. It is proposed to run GR CAL CNL FDC PDC logs at selected intervals, as shown on the attached Proposed Well Plan.
9. No abnormal pressures or temperatures are expected to be encountered in this well.
10. The anticipated starting date for the first well is February 5, 1979, with a duration of approximately 21 days for each well.

PEB:skr

PROPOSED WELL PLAN OUTLINE

WELL NAME: Warren Unit No. 67

COUNTY: Lea

LOCATION: 1980' FNL & 660' FWL
Sec. 25, T-20S, R-38E

STATE: New Mexico

[illegible]

WELL NAME Warren Unit No.67 FIELD NMFU DATE 1-5-79

AFE NO. ELEV. GRD KB PROPOSED TD 6900'

LOCATION (SURF.) 1980' FNL & 660' FNL OF SEC -25 T -20S R -38E

COUNTY Lea STATE New Mexico SPACING 40 Acres

LOCATION (BOTTOM HOLE)

GEOLOGICAL ESTIMATES

<u>ZONE</u>	<u>TOP</u>	<u>THICKNESS</u>	<u>CONTENT</u>	<u>ZONE</u>	<u>TOP</u>	<u>THICKNESS</u>	<u>CON</u>
Rustler Anhy.	1570'						
Salado Salt	1660'						
Tansill Anhy.	2730'						
Yates S.S.	2870'						
San Andres dolo.	4260'						
Glorieta S.S.	5550'						
Blaine S.S.	6035'		O & G				
Tubb S.S.	6530'		O & G				
Drinkard dolo.	6800'						

<u>CORING NO.</u>	<u>TYPE</u>	<u>HORIZON</u>	<u>INTERVAL FROM-TO</u>	<u>FOOTAGE</u>	<u>REMARKS</u>
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None

Samples: None

DRILL STEM TESTSWATER SHUT OFF TESTS

<u>NUMBER</u>	<u>HORIZON</u>	<u>NUMBER</u>	<u>HORIZON</u>	<u>NUMBER</u>	<u>HORIZON</u>	<u>NUMBER</u>	<u>HORIZON</u>
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None

WELL SURVEYS (List types by code numbers as follows: Directional and/or Deviation (1) Deflection (2) Caliper (3) Temperature (4) Electrical (5) Radioactive (6) Geograph (7) Photoclinometer (8) Mudlogging (9) Other (10) and name of that type.)

<u>DEPTH POINTS</u>	<u>TYPE</u>	<u>HOLE SIZE</u>	<u>REMARKS</u>
0-TD	Geograph Deflection		
2600'-TD	GR-CNL-FDC DLL-Cal-Rxo	8 3/4"	2" & 5" (Pull caliper to surf. csg. shoe)
5400'-TD	Dipmeter PDC	8 3/4" Inside Csg.	

FUEL AND WATER (SOURCE)

PROPOSED WELL PLAN

WELL NAME	Warren Unit No.	FIELD	NMFU
<u>ATTACHMENT</u>	<u>NO.</u>	<u>REQUIRED</u>	<u>NOT REQUIRED</u>
CASING CENTRALIZERS, SCRATCHERS	_____	X	_____
CEMENTING	_____	X	_____
MUD PROGRAM	_____	X	_____
WELL PLAN OUTLINE	_____	X	_____
PORE PRESSURE - FRAC GRADIENT	_____	_____	_____
PROJECTED PROGRESS	_____	_____	_____
CROSS SECTION OR WELL COURSE	_____	_____	_____
HYDRAULICS PROGRAM	_____	_____	_____
BIT PROGRAM	_____	_____	_____
VENDER USAGE LIST	_____	_____	_____

DRILLING AND COMPLETION PROCEDURE

- (1) 0-1600' Drill 12 1/4" hole. Set and cement 9 5/8" surface casing. WOC-18 hours. Pressure test to 1000 psi for 30 minutes. Drill out.
- (2) 1600'-6900' Drill 8 3/4" hole. Pressure test shoe to 300#. Drill to TD. Run OH logs. Set and cement 7" OD production casing. WOC-18 hours. Pressure test to 1000# for 30 minutes.
- (3) Detailed completion procedure to be prepared from OH log analysis. Anticipate sand frac on Blinbry and Tubb zones.

CASING, CENTRALIZERS & SCRATCHERS

LIST TYPE OF STRING BY CODE LETTERS, i.e. CONDUCTOR (C); SURFACE (S); INTERMEDIATE (I); PRODUCTION (P); LINER (L); PERFORATIONS (PP)

TYPE OF STRINGS & INTERVAL (FT)		OD	ID	WT PER FT	GRADE	THREAD	AMT	WT. IN AIR, WT. IN MUD		REMARKS
								1000 LBS	1000 LBS	
FROM-TO										
(S)	0-1600'	9 5/8"	8.845"	32.3#	H-40	STC	1600'	51.7	44.7	
(P)	0-5800'	7"	6.241"	23.0#	K-55	STC	5800'	133.4	113.4	
(P)	5800'-6900'	7"	6.151"	26.0#	K-55	STC	1100'	28.6	24.3	Sand blast & ruff- 600' csg. across pay sections

TYPE OF STRING	CENTRALIZERS		SCRATCHER		OTHER ACCESSORY EQUIPMENT		REMARKS
	NO.	FROM-TO	NO.	FROM-TO	NO.	FROM-TO	
(S) Surface	(4)	2 ea. on bottom two jts.	(13)	One every 15' from shoe to 200' from shoe		Guide shoe & float collar	
	(9)	One every 4 jts. to surface					
(P) Production	(4)	2 ea. on bottom two joints	(33)	One every 15' from 5950'-6200' & from 6450'-6700' to 5900'		Float shoe & float collar	
	(8)	One every 3 jts. to 5900'					

MUD PROPERTIES

DEPTH INTERVAL FROM-TO	WEIGHT LBS/CAL	TYPE	OIL %	PH	WATER LOSS (cc)	VIS. (sec.)	YIELD POINT	THINNING ACFTS	WATER LOSS ACFTS
0-1600'	8.5-9.0	Spud	--	9.0+	--	--	--	--	--
1600'-6900'	9.0-10.0	Salt Water Gel	--	9.0-10.0	10-12+	35-40	--	--	--

REMARKS

- (1) Below 1600', drill w/saturated brine to keep hole enlargement to a minimum
- (2) Add gelling agent as required to carry cuttings
- (3) Pressure surges should be kept to a minimum below 1600'
- (4) Condition mud to reduce water loss 100' above Blinebry marker

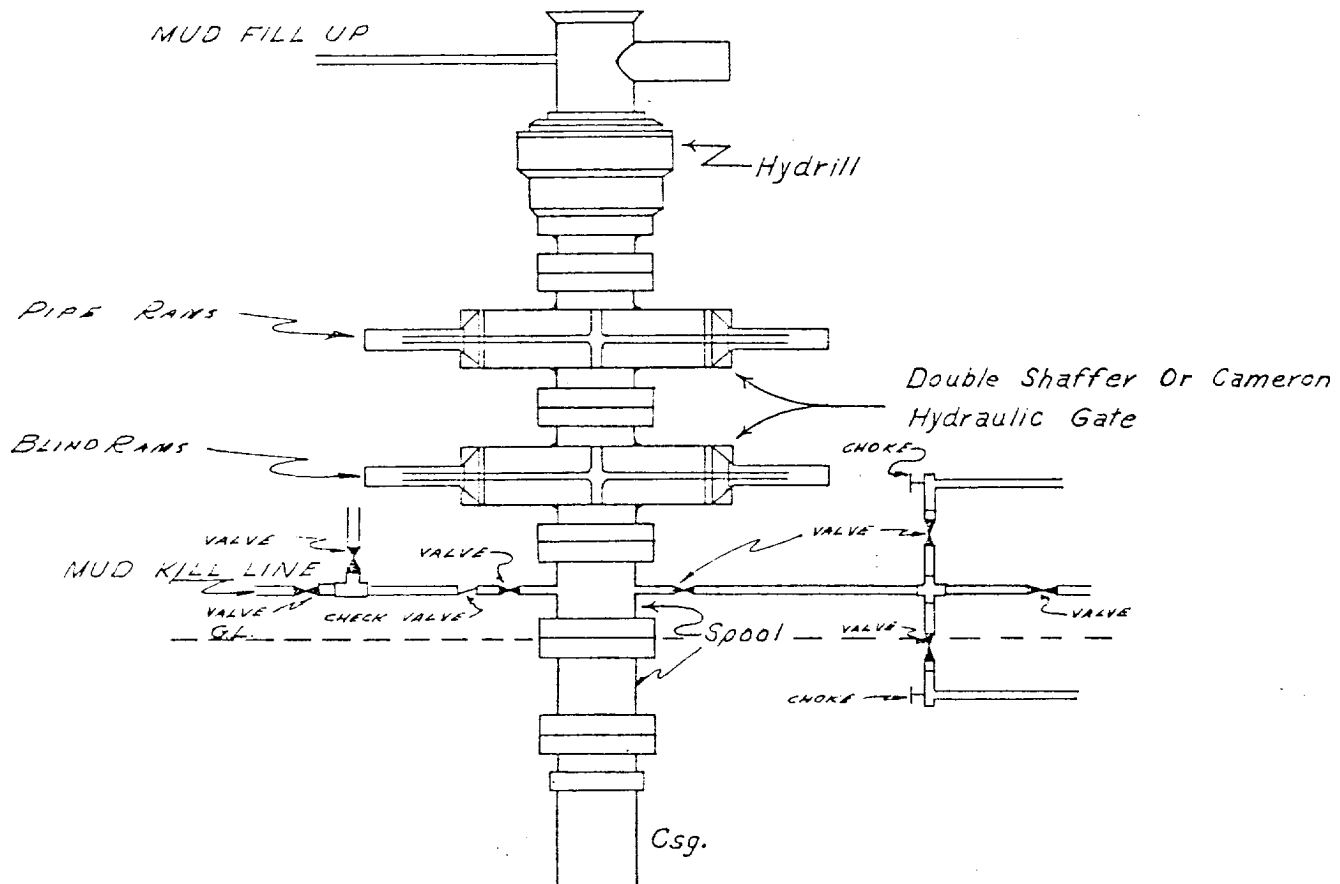
CEMENT

TYPE OF STRING INTERVAL (FT) FROM-TO TYPE MIX	GEL%	SALT%	CaCl ₂	SLURRY WEIGHT LB./GAL.	SLURRY YIELD OF/SKX	TOTAL AMT. REQUIRED SKX/CF	FILL UP	BHT	SIZE	REMARKS
(S) 0-1600' Class "C" 4% (Lead)	--	--	2%	13.3	1.88	400/752	Circ.	85°F	12 1/4"	100% Excess Add 1/4#/sx flocele if lost circ. occurs
Class "C" -- (Tail-in)	--	--	2%	14.8	1.32	200/264	--			
(P) 0-6900' 1st Stg. Class "C" 4% (Lead)		3#/sx	--	13.3	1.88	275/517	To DV Tool @ 4000'	110°F	8 3/4"	100% Excess Add 1/4#/sx flocele if lost circ. occurs
Class "C" -- (Tail-in)	--	3#/sx	--	14.8	1.32	300/396	--			
2nd Stg. - DV Tool @ 4000'										
Lite-Wate --	--	18%	--	13.3	1.93	950/1834	Circ.	95°F	8 3/4"	200% Excess Add 1/4#/sx flocele if lost circ. occurs

REMARKS

- (1) Lab test slurry for production casing
- (2) Condition mud to have low plastic viscosity and yield strength
- (3) Precede cement w/500 gal. mud flush
- (4) Utilize top and bottom plugs. Pump top plug down w/TFW
- (5) Reciprocate casing while cementing
- (6) Recalculate cement volumes from OH caliper logs

CONTINENTAL OIL COMPANY
Blow-out Preventer Specifications



NOTE:

API SERIES 900

Manual and Hydraulic controls with closing unit no less than 75' from well head.
Remote controls on rig floor.

DUE TO SUBSTRUCTURE CLEARANCE,
HYDRILL MAY OR MAY NOT BE USED.