Form 9-331 C
(May 1963)

COPY TO O. C. C.

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-025-26376

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 ☐

b. TYPE OF WELL
OIL WELL ☑ GAS WELL ☐ OTHER SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR
Continental Oil Co.

3. ADDRESS OF OPERATOR
P.O. Box 460 Hobbs, N.M. 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface 1980/S & 1980/E

At proposed prod. zone
SAME

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

5. LEASE DESIGNATION AND SERIAL NO.
LC 031670 b

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
NMFU

8. FARM OR LEASE NAME
WARREN UNIT

9. WELL NO.
77

10. FIELD AND POOL, OR WILDCAT
UNDESIGNATED
TUBB / BLINEBRY

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 20 20S 38E

12. COUNTY OR PARISH
LEA

13. STATE
NM

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

17. NO. OF ACRES ASSIGNED TO THIS WELL
40

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

19. PROPOSED DEPTH
6790'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
3551.5' GR

22. APPROX. DATE WORK WILL START*
July 1, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	9 5/8"	36#	1450'	520 sx CIRCULATE
7 7/8	7"	26#	6790'	1490 sx

It is proposed to drill a straight hole to a TD of 6790' and complete as a Blinebry and Tubb dual oil well.

See Attachment for 10 point well plan.

See Attached for 13 point Surface Use Plan.

RECEIVED
JUN 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 Buttingford TITLE Administrative Supervisor DATE 6-15-79

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED AS AMENDED
DATE JUL 5 1979
ACTING DISTRICT ENGINEER

USGS 6
NMFU 4
JFB 1
FILE

*See Instructions On Reverse Side

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

Continental Oil Company

Warren Unit No. 77
Sec. 20 T20S R38E
Lea County New Mexico

1. The geologic name of the surface formation is Quaternary Sand.

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:

   0-1450' - 9 5/8", 36#, K-55, LT&C
   0-6790' - 7", 26#, K-55, LT&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:

0-1450'	8.5-9.0 ppg	spud mud
1450-6790'	9.0-10.0 ppg	salt water 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 logs at selected intervals.

9. No abnormal pressures or temperatures are expected to be encountered in this well.

10. The anticipated starting date is July 1, 1979, with a duration of approximately 20 days.

PEB:cab

PROPOSED WELL PLAN OUTLINE

WELL NAME: Warren Unit No. 77 COUNTY: Lea

LOCATION: 1980 FSL & 1980 FEL STATE: N.M.
Sec. 20, T20S, R38E

DEPTH	FORMATION TOPS & TYPE	DRILLING PROBLEMS	TYPE OF FORMATION EVALUATION	HOLE	CASING		FRACTURE GRADIENT	FORMATION PRESSURE GRADIENT	MUD	
				SIZE (IN)	SIZE (IN)	DEPTH (FT)	(PPG)	(PPG)	WEIGHT (PPG)	TYPE
	Pleistocene									
	Water SS. 70-170		Drlg. Time Recorder							
1000										
	Rustler Anhy. 1420			12 1/4	9 5/8	1450'			8.5-9.0	Fresh Water
	Salado Salt 1520									
2000										
	Base Salt 2560		Geolograph Deflection							
	Yates SS. 2700									
3000	Seven Rivers dol. 2970		0-TD							
	Queen SS. 3540									
4000	San Andres dol	4100								
5000										
	Glorieta SS.	5400								
	Blinebry Marker dol.	5901 (-2340)	GR-CNL-FDC DLL TD-2600'				14.9	Less Than 8.5		
6000	Tubb SS. 6406	(-2845)	MSFL TD-4780'					Less Than 8.5	9.0-10.0	Salt Gel
	Drinkard dol. T.D. 6790	6710		8 3/4	7"	6790'	15.1			

WELL NAME Warren Unit No. 77 FIELD NMFU DATE 5/29/79

AFE NO. ELEV. GRD KB PROPOSED TD 6790'

LOCATION (SURF.) 1980' FSL & 1980' FEL OF SEC 20 T 20S R 38E

COUNTY Lea STATE N.M. SPACING 40 Acres

LOCATION (BOTTOM HOLE)

GEOLOGICAL ESTIMATES

ZONE	TOP	THICKNESS	CONTENT	ZONE	TOP	THICKNESS	CONT
Water SS.	70'			Tubb SS.	6406'		
Rustler Anhy.	1420'			Drinkard dol.	6710'		
Salado Salt	1520'			TD	6790'		
Base Salt	2560'						
Yates SS.	2700'						
Seven Rivers dol.	2970'						
Queen SS.	3540'						
San Andres dol.	4100'						
Glorieta SS.	5400'						
Blinebry Mkr. dol.	5901'						

CORING NO.	TYPE	HORIZON	INTERVAL FROM-TO	FOOTAGE	REMARKS

None

DRILL STEM TESTS

NUMBER	HORIZON	NUMBER	HORIZON	NUMBER	HORIZON

WATER SHUT OFF TESTS

NUMBER	HORIZO

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) Geolograph (7) Photoclinometer (8) Mudlogging (9) Other (10) and name of that type.)

DEPTH POINTS	TYPE	HOLE SIZE	REMARKS
0-TD	Geolograph Deflection		
2600'-TD	GR-CNL-FDC DLL-Cal.-Rxo	8 3/4"	2" & 5" (Pull caliper to surf. csg shoe)
5000'-TD	PDC	Inside casing	Depth Control

FUEL AND WATER (SOURCE)

PROPOSED WELL PLAN

WELL NAME Warren Unit No. 77 FIELD NMFU

ATTACHMENT	NO.	REQUIRED	NOT REQUIRED
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'-1450' Drill 12 1/4" hole. Set and cement 9 5/8" OD surface casing. WOC 18 hours. Pressure test to 1200# for 30 minutes. Drill out.

2) 1450'-6790' 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 1200# for 30 minutes.

3) Detail completion procedure to be determined from OH log analysis.

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) FROM-TO	OD	ID	WT PER FT	GRADE	THREAD	AMT	WT. IN AIR, 1000 LBS	WT. IN MUD 1000 LBS	REMARKS
(S) 0'-1450'	9 5/8"	8.765"	36#	K-55	ST&C	1450'	52.2		
(P) 0'-6790'	7"	6.151"	26#	K-55	LT&C	6790'	176.5		DV tool @ ± 4000' Sandblast ± 1000' casing across pay section.

TYPE OF STRING	CENTRALIZERS NO.	CENTRALIZERS INTERVAL FROM-TO	SCRATCHER NO.	SCRATCHER INTERVAL FROM-TO	OTHER ACCESSORY EQUIPMENT (SUCH AS DEGASSERS, MUD, CENTRIFUGE FLOAT COLLARS, ETC. - SPECIFY)	REMARKS
(S) Surface	(4)	2 ea. on bottom two joints			Guide shoe & float collar	
	(9)	1 every 4 joints to surface				
(P) Production	(4)	2 ea. on bottom two joints			Float shoe & float collar	
	(9)	1 every 3 joints to 5700'				

MUD PROGRAM

DEPTH INTERVAL FROM-TO	WEIGHT LBS/CAL	TYPE	OIL %	pH	WATER LOSS (cc)	VIS. (sec.)	YEILD POINT	THINNING AGENTS	WATER LOSS AGENTS
0'-1450'	8.5-9.0	Spud	--	9.0+	--				
1450'-6790'	9.0-10.0	Salt Water Gel	--	9.0-10.0	10-12+	35-40			

REMARKS

(1) Below 1450', 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 1450'.
(4) Condition mud to reduce water loss 50' above Blinebry Marker.
(5) Condition mud to reduce viscosity prior to pumping cement.

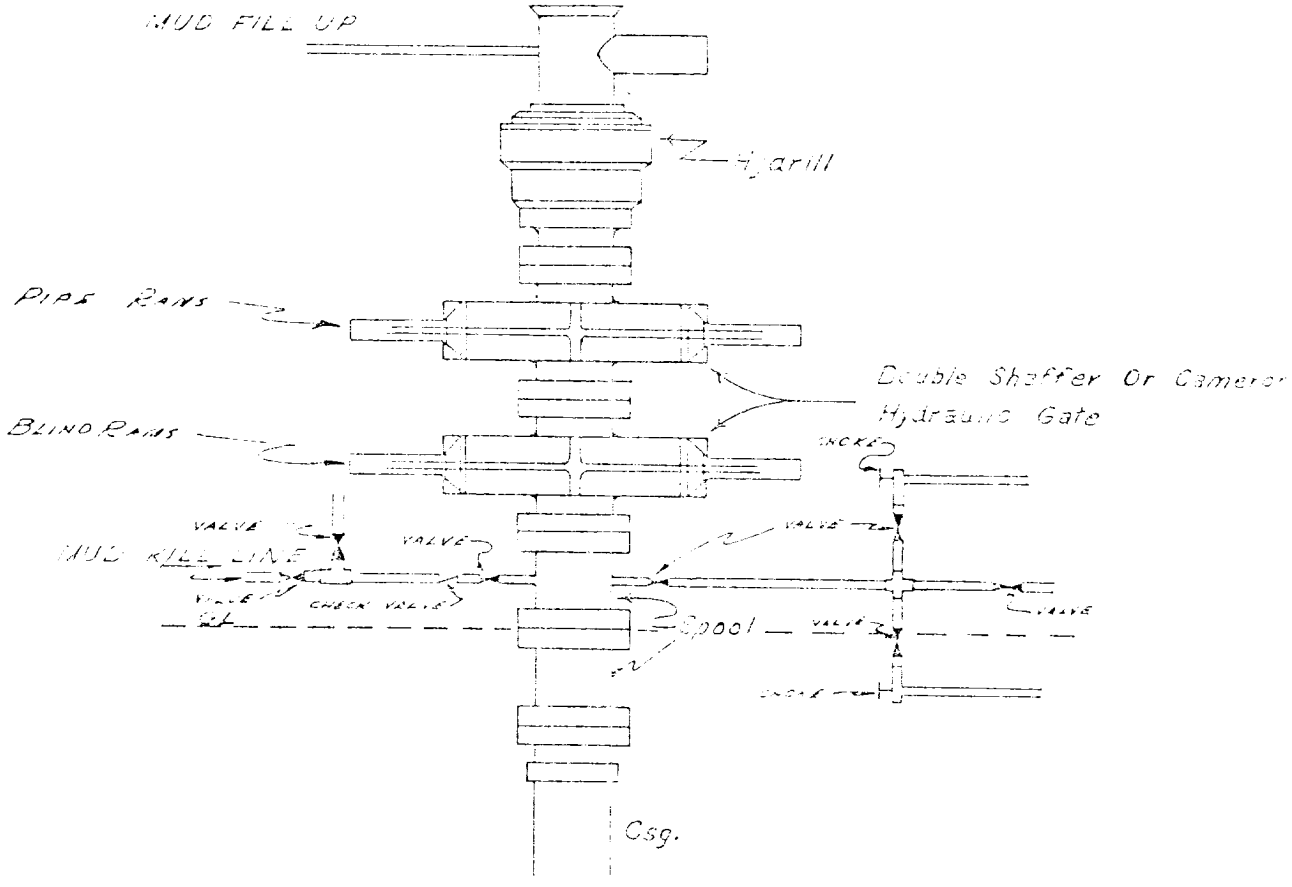
CEMENT

TYPE OF STRING INTERVAL (FT) FROM-TO	TYPE MIX	GEL%	SALT%	CaCl2	SLURRY WEIGHT LB./GAL	SLURRY YIELD CF/SKX	TOTAL AMT. REQUIRED SKX/CF	FILL UP	BHT	SIZE	REMARKS
(S) 0'-1450'	Class "C" (Lead)	4%	--	2%	13.3	1.88	420/790	Circ.	85°F	12 1/4"	100% Excess Add 1/4#/sx flocele if lost circulation occurs.
	Class "C" (Tail-in)	--	--	2%	14.8	1.32	100/132				
(P) 0'-6130'	(1st Stage)										
	Class "C" (Lead)	4%	3#/sx	--	13.3	1.88	290/545	To DV Tool @ ± 4000'	110°F	8 3/4"	100% Excess Add 1/4#/sx flocele if lost circulation occurs.
	Class "C" (Tail-in)	--	3#/sx	--	14.8	1.32	226/298				
					DV STAGE TOOL @ ± 4,000'						
	(2nd Stage)										
	Lite-Wate	--	18%	--	13.3	1.93	975/1876	Circ.	95°F	8 3/4"	200% Excess Add 1/4#/sx flocele if lost circulation occurs

REMARKS

1. Lab test slurry for production casing.
2. Condition mud to have low plastic viscosity & yield strength.
3. Precede cement w/500 gals. mud flush.
4. Utilize top & bottom plugs. Pump top plug down w/TFW.
5. Recalculate cement volumes from OH caliper log.
6. Reciprocate casing while cementing.
7. Condition mud to reduce viscosity prior to cementing.

CONTINENTAL OIL COMPANY
Blow-out Preventer Specifications



API Series 900

NOTE:

Manual and Hydraulic controls with closing unit no less than 50' from well head.
Remote controls on rig floor.

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

NE EXICO OIL CONSERVATION COMMISSIC

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-1 2
Supersedes C-128
Effective 14-65

All distances must be from the outer boundaries of the Section

Operator: CONTINENTAL OIL CO.		Lease: WARREN UNIT		Well No.: 77
Unit Letter: J	Section: 20	Township: 20 SOUTH	Range: 38 EAST	County: LEA
Actual Footage Location of Well: 1980 feet from the SOUTH line and 1980 feet from the EAST line				
Ground Level Elev.: 3551.5	Producing Formation: TUBB / BLINEBRY	Pool: WARREN TUBB / BLINEBRY OIL & GAS		Dedicated Acreage: 40 Acres

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

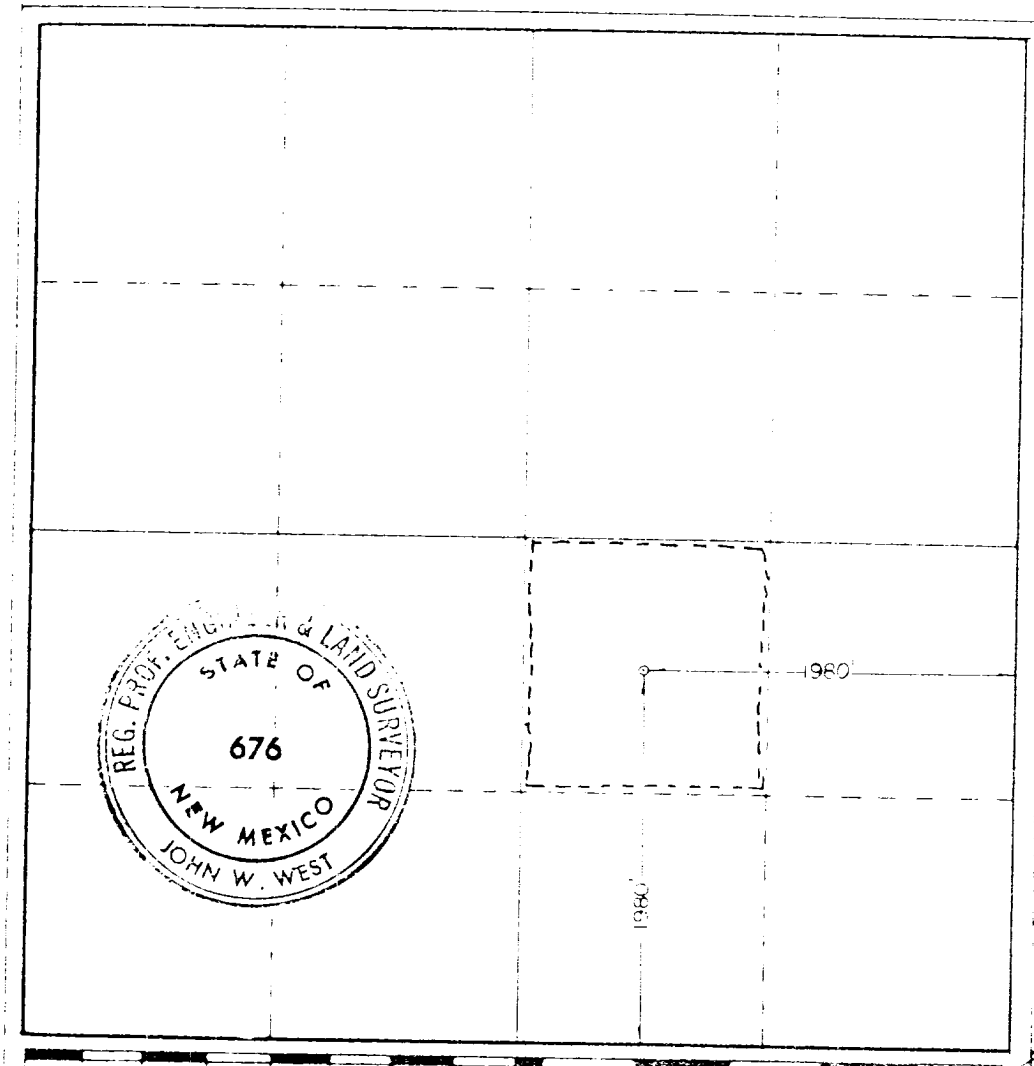
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



REG. PROF. ENGR. & LAND SURVEYOR
STATE OF
676
NEW MEXICO
JOHN W. WEST

CERTIFICATION

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

Name: Wm A. Buttingfield
Position: ADMINISTRATIVE SUPERVISOR
Company: CONTINENTAL OIL CO.
Date: JUNE 15, 1979

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: JUNE 11TH, 1979
Registered Professional Engineer and/or Land Surveyor
Certificate No. John W. West 676

SURFACE USE PLAN
Continental Oil Company
Warren Unit No. 77
T20S R38E
Lea County, New Mexico

The plan is to accompany "Application for Permit to Drill" the subject well. The following is a discussion of pertinent information concerning possible effect which the proposed drilling of the well may have on the environment of the well and road sites and surrounding acreage. A copy will be posted on the derrick floor so that all contractors and sub-contractors will be aware of all items of this plan.

1. EXISTING ROADS

A. The proposed well site is 1980' FSL and 1980' FEL, Sec. 20, T20S, R38E, Lea County, New Mexico.

B. Exhibit "A" is a portion of a New Mexico road map showing existing black top roads. Directions to the location are as follows: From Stanolind Road in Hobbs, travel south on Highway 18 approximately 10 miles and turn west through the red, white, and blue cattle-guard. See Exhibit "B" for lease roads to location.

C,D,E. Access roads are shown on Exhibits "B" and "C".

F. No improvement or maintenance are anticipated for the existing roads.

2. PLANNED ACCESS ROADS

A. Width and Length: New road required will be 12' wide and 100' long. This new road is labeled and coded on Exhibits "B" and "C".

B. Turnouts: None.

C. Drainage Design: New road will have a drop of 6" from center line on each side.

D. Culverts, Cuts and Fills: None required.

E. Surfacing Material: Six inches of caliche, bladed, watered, and compacted.

F. Gates, Cattleguards, Fences: None required.

G. The proposed road is staked.

3. LOCATION OF EXISTING WELLS

See Exhibit "C".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

A. Tank Batteries: No new tank batteries are required. Existing batteries are spotted on attached Exhibit "B".

B. Producing Facilities: No new producing facilities are required.

C. Oil Gathering Lines: Flow lines will lay on the surface alongside the road right-of-way.

D. Other Lines: Electrical distribution lines will be constructed on 330' spans as shown on Exhibit "E".

D. Rehabilitation: Pits will be backfilled and leveled as soon as practical to original condition. Commencement of rehabilitation operations will immediately follow removal of drilling and completion equipment from location. Rehabilitation of the surface is planned to be completed within 45 days from commencement.

5. WATER SUPPLY

Water will be hauled from Eunice, New Mexico.

6. SOURCE OF CONSTRUCTION MATERIALS

Caliche will be hauled over existing roads from a pit in the SE/SE, Sec. 15, T-20S, R-38E.

7. METHODS FOR HANDLING WASTE DISPOSAL

Waste Disposal: Well cuttings will be disposed in reserve pit. Barrel trash containers to be in accessible locations within drill site area during drilling and completion procedures. All detrimental waste will be hauled away, burned or buried with a minimum cover of 24" of dirt. See Exhibit "D" for location of pits. If well is productive, maintenance waste will be placed in special trash cans and hauled away periodically. Any produced water will be collected in tanks until hauled to an approved disposal system, or separate disposal applications will be submitted to the survey for appropriate approval.

8. ANCILLARY FACILITIES

None.

9. WELL SITE LAYOUT

Exhibit "D" shows the relative location and dimensions of the well pad, mud pit, reserve pit, etc. The reserve pit will be lined with plastic. The pad and pits are staked.

10. PLANS FOR RESTORATION OF SURFACE

Pits will be backfilled and leveled as soon as practical to original condition. Commencement of rehabilitation operations will immediately follow removal of drilling and completion equipment from location and rehabilitation of the surface is planned to be completed within 45 days from commencement.

11. OTHER INFORMATION

A. Terrain: Flat.

B. Soil: Sandy.

C. Vegetation: Shinnery, mesquite, sparse.

D. Surface Use: Grazing.

E. Ponds and Streams: None within one mile.

F. Water Wells: None.

G. Residences and Buildings: None.

H. Arroyos, Canyons, Etc.: None.

I. Well Sign: Sign identifying and locating well will be maintained at drill site with the spudding of the well.

J. Open Pits: All pits containing mud or other liquids will be fenced.

K. Archaeological Resources: None observed.

12. OPERATOR'S REPRESENTATIVE

Field personnel who can be contacted concerning compliance of this Surface Use Plan are as follows:

Production and Drilling
W. D. Cates or H. C. Pokrandt
1001 North Turner
Hobbs, New Mexico 88240
Phone: 393-4141

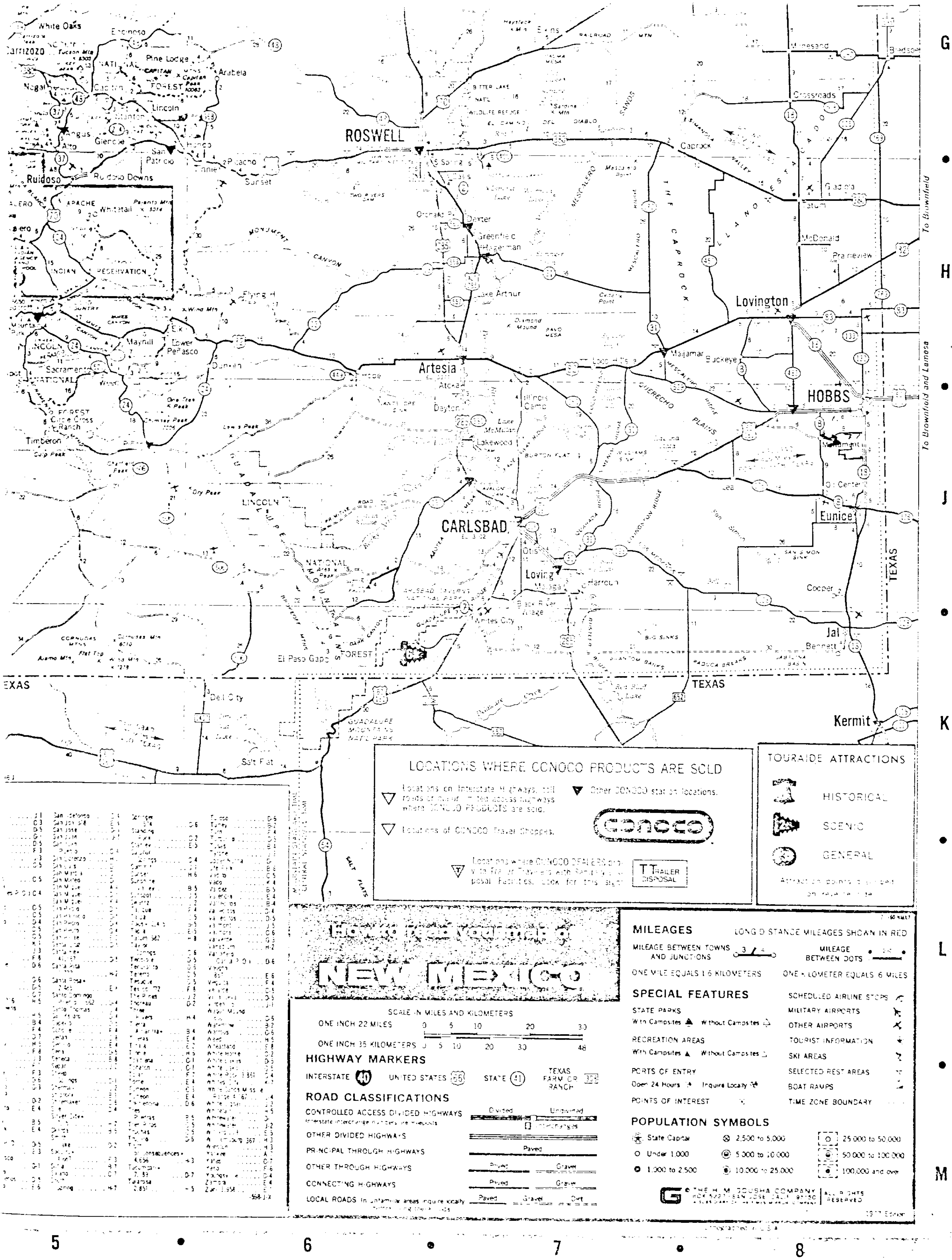
13. CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Continental Oil Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

6-15-79
Date

Production Superintendent

PEB:cab



White Oaks
Carrizozo
Nogal
Capitan
Lincoln
Arabela
Pine Lodge
Angus
Alto
Glencoe
San Patricio
Hondo
Tinnie
Picacho
Sunset
Ruidoso
Ruidoso Downs
APACHE
Whitetail
INDIAN
RESERVATION
Flying H
Mayhill
Elk
Lower Peñasco
Dunken
Sacramento
Weed
Cloudcroft
Pinon
Timberon
ROSWELL
Dexter
Hagerman
Lake Arthur
Artesia
Atoka
Dayton
Lakewood
CARLSBAD
Otis
Loving
Malaga
Harroun
Whites City
Dell City
Salt Flat
El Paso Gap
LINCOLN
NATIONAL
FOREST
Caprock
Crossroads
Tatum
McDonald
Prairieview
Lovington
Maljamar
Buckeye
HOBBS
Monument
Oil Center
Eunice
Cooper
Jal
Bennett
Kermit
TEXAS
To Brownfield
To Brownfield and Lamesa
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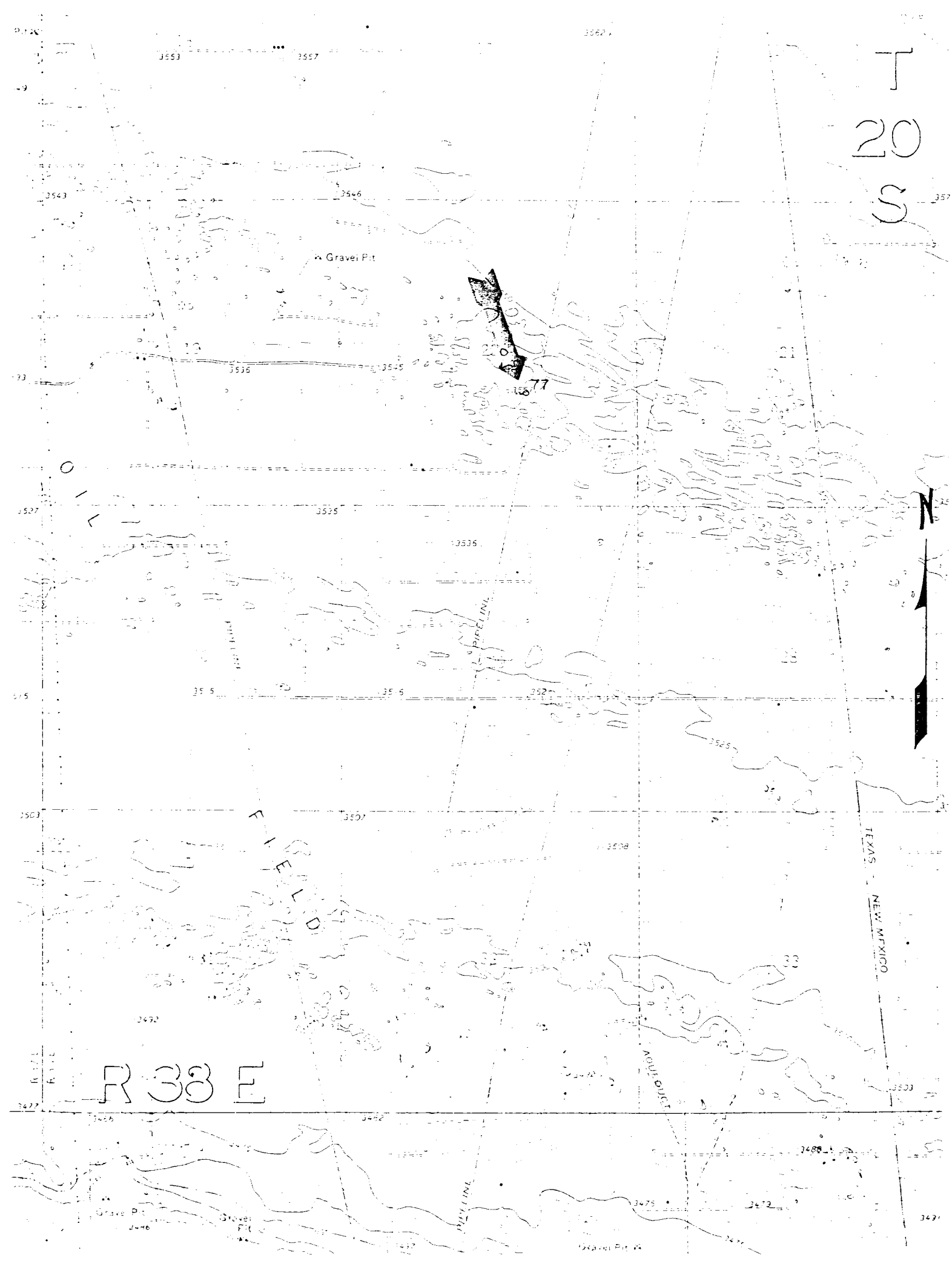
LOCATIONS WHERE CONOCO PRODUCTS ARE SOLD
Other CONOCO station locations.
Locations of CONOCO Travel Shoppes.
conoco
TRAILER DISPOSAL
TOURAIDE ATTRACTIONS
HISTORICAL
SCENIC
GENERAL
NEW MEXICO
MILEAGES
LONG DISTANCE MILEAGES SHOWN IN RED
MILEAGE BETWEEN TOWNS AND JUNCTIONS
MILEAGE BETWEEN DOTS
ONE MILE EQUALS 1.6 KILOMETERS
ONE KILOMETER EQUALS .6 MILES
SPECIAL FEATURES
STATE PARKS
With Campsites
Without Campsites
RECREATION AREAS
With Campsites
Without Campsites
PORTS OF ENTRY
Open 24 Hours
Inquire Locally
POINTS OF INTEREST
SCHEDULED AIRLINE STOPS
MILITARY AIRPORTS
OTHER AIRPORTS
TOURIST INFORMATION
SKI AREAS
SELECTED REST AREAS
BOAT RAMPS
TIME ZONE BOUNDARY
SCALE IN MILES AND KILOMETERS
ONE INCH 22 MILES
ONE INCH 35 KILOMETERS
HIGHWAY MARKERS
INTERSTATE
UNITED STATES
STATE
TEXAS FARM OR RANCH
ROAD CLASSIFICATIONS
CONTROLLED ACCESS DIVIDED HIGHWAYS
Divided
Undivided
OTHER DIVIDED HIGHWAYS
PRINCIPAL THROUGH HIGHWAYS
Paved
OTHER THROUGH HIGHWAYS
Paved
Gravel
CONNECTING HIGHWAYS
Paved
Gravel
LOCAL ROADS In unfamiliar areas inquire locally
Paved
Gravel
Dirt
POPULATION SYMBOLS
State Capital
Under 1,000
1,000 to 2,500
2,500 to 5,000
5,000 to 10,000
10,000 to 25,000
25,000 to 50,000
50,000 to 100,000
100,000 and over
THE H. M. GOUSHA COMPANY
ALL RIGHTS RESERVED


T 20 S
R 38 E
Gravel Pit
Gravel Pit
Gravel Pit
OIL FIELD
PIPE LINE
PIPE LINE
PIPE LINE
TEXAS - NEW MEXICO
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