

UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT 3-20-97 *ROM*

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. LC-060967	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Cross Timbers Operating Company			7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. 3000 N. Garfield, Suite 175, Midland, Texas 79705			8. FARM OR LEASE NAME, WELL NO. SEMGAU #110	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 2310' FEL & 1650' FSL, Sec. 30, T17S, R33E At proposed prod. zone Same			9. API WELL NO.	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 6 miles Southeast of Maljamar, New Mexico			10. FIELD AND POOL, OR WILDCAT Maljamar Grayburg San Andres	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 330'			11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA Sec. 30, T17S, R33E	
16. NO. OF ACRES IN LEASE 120			12. COUNTY OR PARISH Lea	
17. NO. OF ACRES ASSIGNED TO THIS WELL 20			18. STATE New Mexico	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 640'			19. PROPOSED DEPTH 4500'	
20. ROTARY OR CABLE TOOLS Rotary			21. APPROX. DATE WORK WILL START* 4-1-97	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 4046' G.L.			22. APPROX. DATE WORK WILL START* 4-1-97	

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASINO	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8", J-55	24	400'	250 sx
7-7/8"	5-1/2", J-55	15.5	4500'	850 sx

1. Drill 12-1/4" hole & set 8-5/8" surface csg. Circ cmt to surf.
2. NU BOP. Log BOP checks in IADC report & drill 7-7/8" hole to 4500'.
3. Set 5-1/2" csg at TD. Circ cmt to surf.

EXHIBITS ATTACHED:

- Exhibit "A" - Location and elevation plat.
- " " "B" - Ten point compliance program.
- " " "C" - Pressure control equipment.
- " " "D" - Surface use plan.
- " " "E" - Existing & planned access roads.
- " " "F" - Location of existing wells.
- " " "G" - Proposed well site layout.
- " " "H" - Drill pad (cut & fill diagram).
- " " "I" - Surface owner damage agreement.

OPER. OGRID NO. 5380
PROPERTY NO. 3355
POOL CODE 43329
EFF. DATE 4/2/97
API NO. 30.025-33905

RECEIVED

MAR 20 97

SUM
ROSWELL, NM

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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 Mark H. Gough TITLE Drilling Engineer DATE 3-18-97

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY (ORIG. SGD.) ARMANDO A. LOPEZ TITLE Acting Asst. MINERALS DATE 3/31/97

*See Instructions On Reverse Side

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Oil Lease - 3 Copies

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MAR 20 '97

AMENDED REPORT

SUM REC'D / MIDLAND

ROSWELL, NM

MAR 11 1997

API Number 3D-025-338D5	Pool Code 43329	Pool Name Maljamar Grayburg San Andres
Property Code 003355	Property Name SEMGSAU	Well Number 110
OGRID No. 005380	Operator Name CROSS TIMBERS OPERATING CO.	Elevation 4046'

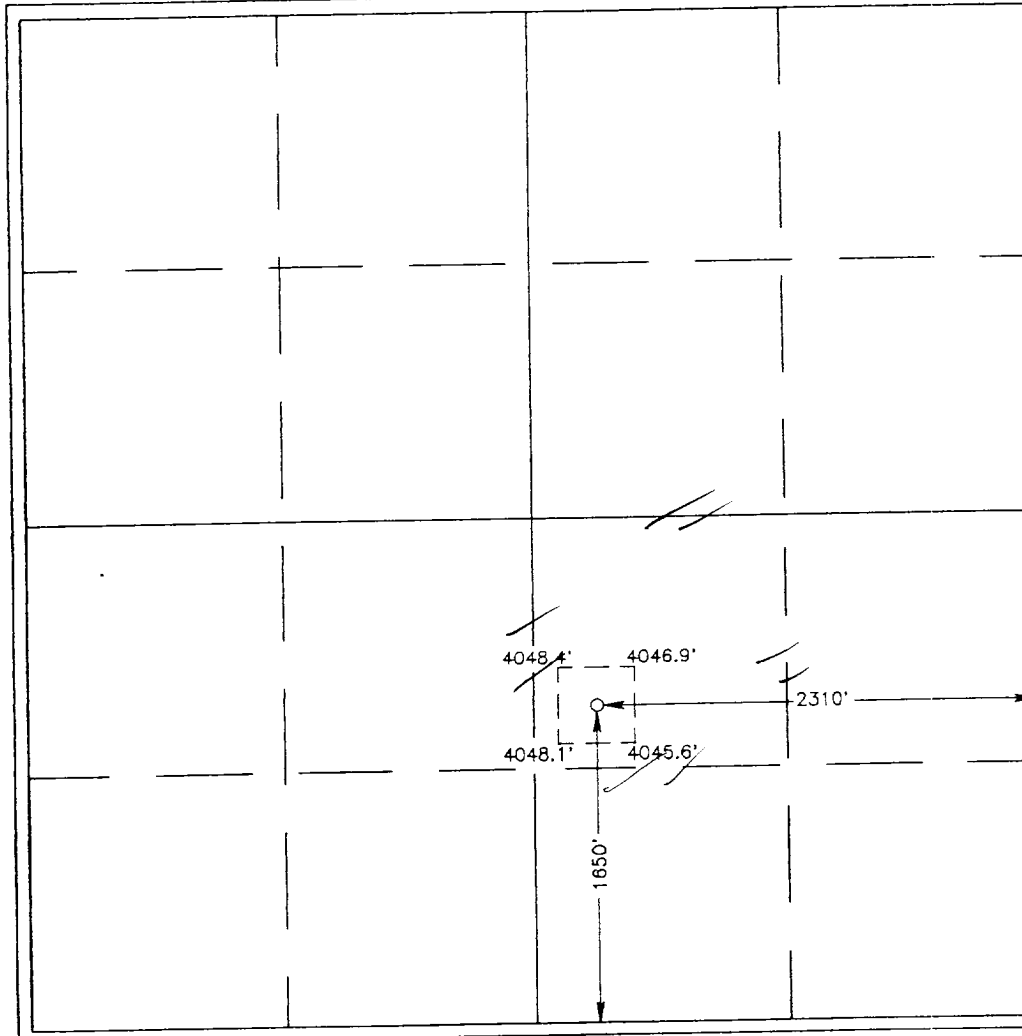
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	30	17 S	33 E		1650	SOUTH	2310	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40	Joint or Infill I	Consolidation Code U	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

Mark A. Gosch
Signature

Mark A. Gosch
Printed Name

Drilling Engineer
Title

3-18-97
Date

SURVEYOR CERTIFICATION

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 belief.

MARCH 5, 1997

Date Surveyed
Signature & Seal of
Professional Surveyor

Ronald J. Hudson
3-10-97
3-11-0470

Certificate No. JOHN W. WES 676
RONALD J. HUDSON 3239
GARY EDSON 12641

EXHIBIT "B"
APPLICATION FOR PERMIT TO DRILL
TEN-POINT COMPLIANCE PROGRAM
CROSS TIMBERS OPERATING COMPANY
SEMGS AU # 110
2310' FEL & 1650' FSL
SEC 30 - T17S - R33E
LEA COUNTY, NEW MEXICO

In conjunction with Form 3160 - 3, Application for permit to Drill, Cross Timbers Operating Company submits the following items of pertinent information in accordance with Onshore Oil and Gas Order No's 1 and 2, and with all other applicable Federal and State regulations.

1. The geologic surface formation is Quaternary Alluvium.
2. The estimated geologic markers are as follows:

Top of Salt	-	1396'
Base of Salt	-	2416'
Grayburg	-	3716'
Premier SS	-	4226'
San Andres	-	4271'

3. The estimated depths at which water, oil and/or gas are expected to be encountered:

Fresh Water:	None in the area.		
Oil and/or Gas	Grayburg	-	3716' to 4226'
	Premier SS	-	4226' to 4271'
	San Andres	-	4271' to 4500'

4. Proposed Casing Program:

<u>Hole Size</u>	<u>Setting Depth</u>	<u>Size (OD)</u>	<u>Weight, Grade and Joint</u>	<u>New or Used</u>
12 1/4"	400'	8 5/8"	24#, J55, STC	Used
7 7/8"	4500'	5 1/2"	15.5#, J55, STC	Used

Cement Program:

Surface Casing: 250 sx Premium Plus cement with 2% CaCl and 1/4 #/sx Flocele.
Production Casing: Lead with 775 sx Premium Plus cement with 3% Econolite and 1/4 #/sx Flocele, Tail in with 200 sx Premium Plus cement with 0.2% Halad-322 and 0.4% Halad-9.

5. **Pressure Control Equipment:**

The BOPE will be a Shaffer type double gate preventer Series 900 - 3000# W.P. Exhibit "C" is a schematic diagram of the minimum blowout preventer stack that will be used. The BOP's will be hydraulically tested to half the working pressure after nipping up and after any use under pressure. Pipe rams will be operationally checked each 24 hour period, as will the blind rams each time pipe is pulled out of the hole. Such checks will be noted on the daily tour reports.

Accessories to the BOPE will include an upper kelly cock, floor safety valve, and choke manifold with pressure rating equivalent to the BOP stack.

6. **Mud Program:**

Surface: Fresh water spud mud.
Production: Brine Envirodrill - NS.

<u>Depth</u>	<u>Mud Weight</u>	<u>Viscosity</u>	<u>API Filtrate</u>
0' - 400'	8.4 - 8.8 ppg	32 - 36 sec	No Control
400' - 4500'	10.0 - 10.1 ppg	28 - 30 sec	No Control

7. **Auxiliary Equipment:**

An upper kelly cock will be used in the kelly

A safety valve will be on the floor at all times, to be stabbed into the drill string when the kelly is not in the string.

H2S compliance package will be installed prior to drilling the Grayburg formation to monitor the system for H2S.

8. **Testing, Logging, and Coring Program:**

No drill stem tests are anticipated.

No open hole logs will be run, a cased hole CNL/Spectral GR will be run prior to completion.

No coring is anticipated.

9. Anticipated Abnormal Pressures, Temperatures, or Other Hazards:

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area to the anticipated depth of this well.

Anticipated Bottom Hole Pressure (BHP) = 1975 psi.

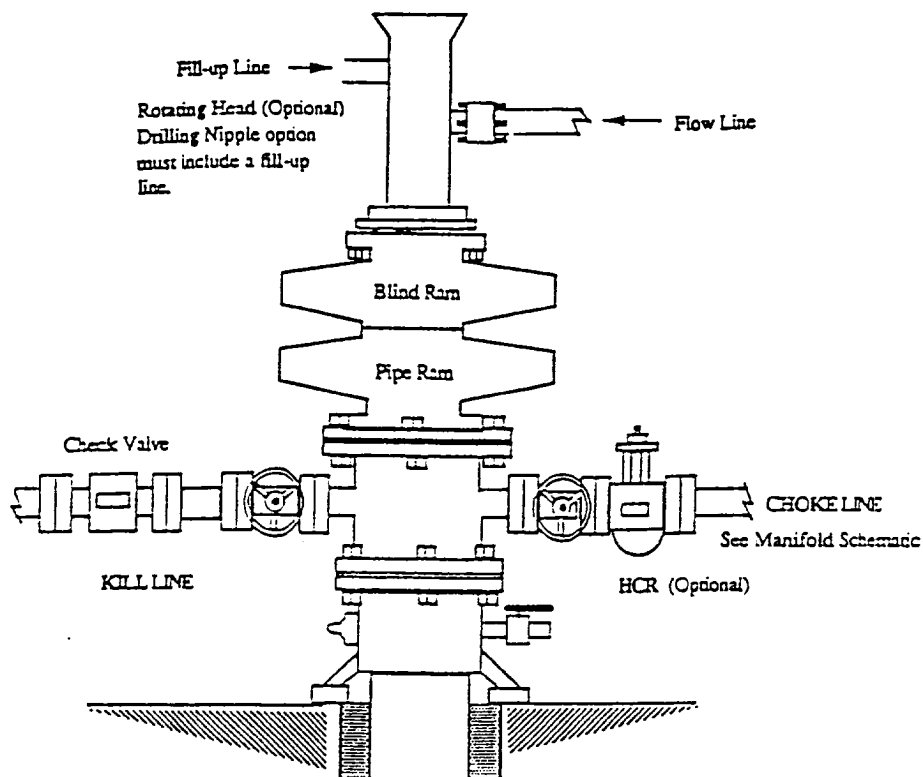
Hydrogen Sulfide is known to exist in formations at the depths the wellbore will penetrate, a H₂S compliance package will be rigged up prior to drilling those formations.

10. Anticipated Starting Date and Duration of Operations:

The anticipated starting date will be as soon as possible after examination and approval of drilling requirements. Drilling operations should be completed within 10 days after spudding the well and drilling to TD.

EXHIBIT "C" - PRESSURE CONTROL EQUIPMENT

BOPE SCHEMATIC FOR DRILLING OPERATIONS
CLASS I - NORMAL PRESSURE
CROSS TIMBERS OPERATING COMPANY STANDARD



CHOKE MANIFOLD SCHEMATIC FOR DRILLING OPERATIONS
2M & 3M SERVICE
CROSS TIMBERS OPERATING COMPANY STANDARD

