

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

a. TYPE OF WORK

DRILL ☒

DEEPEEN ☐

b. TYPE OF WELL

OIL
WELL ☐

GAS
WELL ☒

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Cross Timbers Operating Company

3. ADDRESS AND TELEPHONE NO.

2700 Farmington Ave., Bldg. K, Ste 1 Farmington, NM 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

1,060' FNL & 660' FEL

At proposed prod. zone

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

Approx 7 miles northeast of the Flora Vista, NM Post Office

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any) 660'

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT. 375'

16. NO. OF ACRES IN LEASE

318.65

17. NO. OF ACRES ASSIGNED

TO THIS WELL 318.65

19. PROPOSED DEPTH

7,125'

20. ROTARY OR CABLE TOOLS

Rotary Tools

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

5,870' Ground Level

22. APPROX. DATE WORK WILL START*

Fall 2001

23.

PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE, SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|-----------------------|-----------------|---------------|--------------------------------------|
| 12-1/4" | 8-5/8", J-55 | 24.0# | 350' | 245 sx Type III cmt, circ to surface |
| 7-7/8" | 4-1/2", J-55 | 10.5# | 7,125'— | 710 sx Premium Lite cmt. |

This action is subject to technical and
procedural review pursuant to 43 CFR 3105.3
and appeal pursuant to 43 CFR 3105.4.

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

Cross Timbers plans to drill the above mentioned well as described in the enclosed Surface Use
Program.

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 prevention program, if any.

24.

SIGNED

TITLE

Drilling Engineer

DATE

7/31/01

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

9/5/01

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

TITLE

DATE

SEP - 5

*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.

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

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

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

REC'D / SAN

MAY 14 2001

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | | |
|---|---|---------------------------------|--|
| ¹ API Number 30-045-30761 | | ² Pool Code 71599 | ³ Pool Name BASIN DAKOTA |
| ⁴ Property Code 22620 | ⁵ Property Name L.C. KELLY | | ⁶ Well Number 5M |
| ⁷ GRID No. 167067 | ⁸ Operator Name CROSS TIMBERS OPERATING CO. | | ⁹ Elevation 5870' |

¹⁰ Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| A | 3 | 30-N | 12-W | | 1060 | NORTH | 660 | EAST | SAN JUAN |

¹¹ 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 |
|---|---------|--------------------------------------|-------|----------------------------------|---------------|-------------------------|---------------|----------------|--------|
| | | | | | | | | | |
| ¹² Dedicated Acres 318.65 | | ¹³ Joint or Infill E/2 | | ¹⁴ Consolidation Code | | ¹⁵ 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

| | | | | | | | | | |
|--------|--|---|--|-------------------------|--|---|--|---|--|
| 16 | | QTR. CORNER FD 3 1/2" BC BLM 1951 | | S 89-37-24 W 2642.3' | | SEC. CORNER FD 3 1/2" BC BLM 1951 | | 17 | |
| LOT 8 | | LOT 7 | | LOT 6 | | LOT 5 | | OPERATOR CERTIFICATION | |
| LOT 9 | | LOT 10 | | LOT 11 | | LOT 12 | | I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief | |
| LOT 16 | | LOT 15 | | LOT 14 | | LOT 13 | | Signature JEFFREY W PATTON | |
| LOT 17 | | LOT 18 | | LOT 19 | | LOT 20 | | Printed Name DRILLING- ENGINEER | |
| | | | | | | | | Title 7-31-01 | |
| | | | | | | | | Date | |
| | | | | | | | | 18 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. | |
| | | | | | | | | Date of Survey 5-21-01 | |
| | | | | | | | | Signature and Seal of Professional Surveyor 8894 | |
| | | | | | | | | Certificate Number | |

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

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

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102

Revised February 21, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

REC'D / SAN

MAY 14 2001

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---|---|--|
| ¹ API Number 30-045-30761 | ² Pool Code 72319 | ³ Pool Name BLANCO MESAVERDE |
| ⁴ Property Code 22620 | ⁵ Property Name L.C. KELLY | ⁶ Well Number 5M |
| ⁷ GRID No. 167067 | ⁸ Operator Name CROSS TIMBERS OPERATING CO. | ⁹ Elevation 5870' |

¹⁰ Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| A | 3 | 30-N | 12-W | | 1060 | NORTH | 660 | EAST | SAN JUAN |

¹¹ 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 |
|---|---------|---|---------------------------------------|---------|-------------------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |
| ¹² Dedicated Acres 318.65 | | ¹³ Joint or Infill E 2 | ¹⁴ Consolidation Code I | | ¹⁵ 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

| | | | | | |
|--------|---|--------------------------------------|--|---|--|
| 18 | QTR. CORNER FD 3 1/2" BC BLM 1951 | S 89-37-24 W 2642.3' | SEC. CORNER 17 FD 3 1/2" BC BLM 1951 | OPERATOR CERTIFICATION | |
| LOT 8 | LOT 7 | LOT 6 | LOT 5 | I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief | |
| | | LAT: 36°50.7' N LONG: 108°04.8' W | 881' 660' | Signature <u>JWP Patton</u> | |
| LOT 9 | LOT 10 | LOT 11 | LOT 12 | Printed Name <u>JEFFREY W. PATTON</u> | |
| | | | | Title <u>DRILLING ENGINEER</u> | |
| | | | | Date <u>7-31-01</u> | |
| LOT 16 | LOT 14 | LOT 13 | LOT 12 | 18 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. | |
| LOT 17 | LOT 18 | LOT 19 | LOT 20 | Date of Survey <u>5-21-01</u> | |
| | | | | Signature and Seal of Professional Surveyor: <u>8894</u> | |
| | | | | Certificate Number <u>8894</u> | |

SEP 2001 RECEIVED OIL CON. DIV DIST. 3

NEW MEXICO PROFESSIONAL LAND SURVEYOR 8894

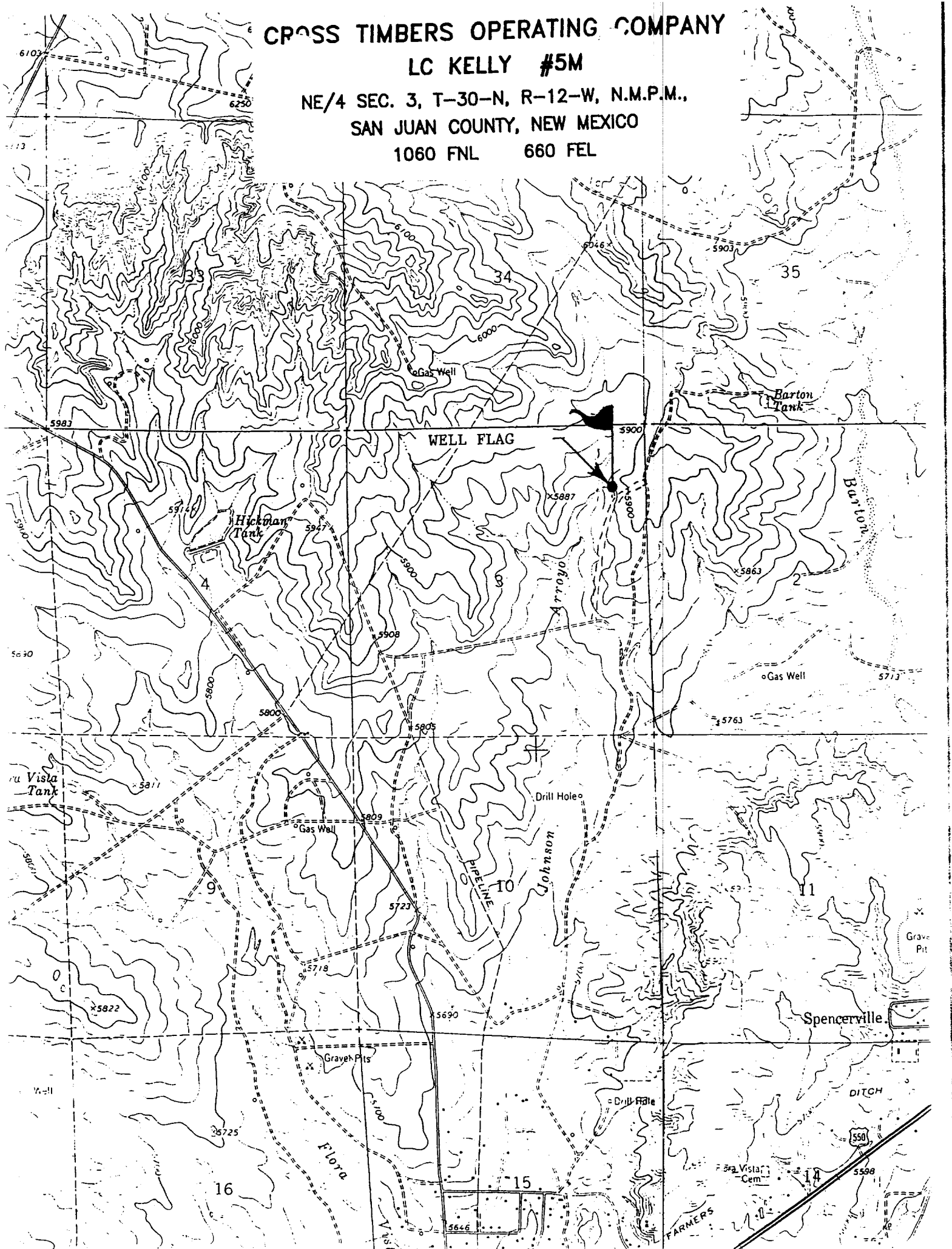
CROSS TIMBERS OPERATING COMPANY

LC KELLY #5M

NE/4 SEC. 3, T-30-N, R-12-W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

1060 FNL 660 FEL



4. CEMENT PROGRAM (Slurry design may change slightly, but the plan is to circulate cement to surface on both casing strings):

A. Surface: 8-5/8", 24#, J-55, STC casing to be set at $\pm 350'$.

Lead: 245 sx of Class "B" cement (or equivalent) containing 2% CaCl_2 , 1/4 pps celloflake, mixed at 15.6 ppg, 1.18 ft^3/sk , & 5.20 gal wtr/sk.

Total slurry volume is 289 ft^3 , 100% excess of calculated annular volume to 350'.

B. Production: 4-1/2", 10.5#, J-55, STC casing to be set at $\pm 7,125'$.

510 sx of Lite-Crete cement (proprietary blend) containing 1/4 pps celloflake mixed at 9.5 ppg, 2.52 ft^3/sk , 11.50 gal wtr/sx followed by 200 sx 50/50 class "G" with poz, 6 % gel, 1/4#/sx celloflake, 0.2% dispersant & 0.2% fluid loss additive mixed at 13.0 ppg, 1.42 cuft/sx, 9.85 gal/sx.

Total estimated slurry volume for the 4-1/2" production casing is 1,569 ft^3 (no excess).

Note: The slurry design may change slightly based upon actual conditions. Final cement volumes will be determined for the caliper logs plus 20%. It will be attempted to circulate cement to the surface.

5. LOGGING PROGRAM:

A. Mud Logger: The mud logger will log from 3,500' to TD (7,125').

B. Open Hole Logs as follows: Run Array Induction/SFL/GR/SP fr/TD to the bottom of the surface csg. Run Neutron/Lithodensity/Pe/GR/Cal from TD to 3,500'. Formation Micro Imager (FMI) will be run on most wells from TD to $\pm 6,600'$.

6. FORMATION TOPS:

Est. KB Elevation: 5,882'

| Formation | Subsea Depth | Well Depth |
|----------------------|--------------|------------|
| Farmington Sandstone | +4907' | 976' |
| Fruitland Formation | +4021' | 1862' |
| Lower Fruitland Coal | +3701' | 2182' |
| Pictured Cliffs SS | +3669' | 2214' |
| Lewis Shale | +3439' | 2444' |

BOP SCHEMATIC FOR DRILLING OPERATIONS CLASS 1 (2M) NORMAL PRESSURE

TESTING PROCEDURE

1. Test BOP after installation:
Pressure test BOP to 200-300 psig (low pressure) for 5 min.
Test BOP to Working Press or to 70% internal yield of surf csg (10 min).
2. Test operation of (both) rams on every trip.
3. Check and record Accumulator pressure on every tour.
4. Re-pressure test BOP stack after changing out rams.
5. Have kelly cock valve with handle available.
6. Have safety valve and subs to fit all sizes of drill string.

