

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

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

1,235' FSL & 740' FEE FWL
At proposed prod. zone

5. LEASE DESIGNATION AND SERIAL NO.

SF-081078

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

22671

8. FARM OR LEASE NAME, WELL NO.

Chavez Gas Com "C" #1M

9. API WELL NO.

30-045-30711

10. FIELD AND POOL, OR WILDCAT

Basin Dakota /
Blanco Mesaverde

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA

M Sec 23, T29N, R10W

12. COUNTY OR PARISH

San Juan

13. STATE

NM

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

This well is located approx 4 miles southwest of the Blanco, NM Post Office.

15. DISTANCE FROM PROPOSED*
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any) 740'

16. NO. OF ACRES IN LEASE

320

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320

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

100'

19. PROPOSED DEPTH

6,850'

20. ROTARY OR CABLE TOOLS

0-6,850' Rotary Tools

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

5,599' Ground Level

22. APPROX. DATE WORK WILL START*

Summer 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"	9-5/8" H-40	36 #/ft	+350'	+ 185 sx c1 B cmt
7-7/8"	4-1/2" J-55	10.5 #/ft	+6850'	+ 680 sx cmt

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4.

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.



RECEIVED
JUN 26 AM 8:41
070 Farmington, 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

M Patton

TITLE Drilling Engineer

DATE 6/20/01

(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:

/s/ Lee Otterl

APPROVED BY

TITLE

FM

DATE

7-27-01

*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.

NMOCD

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

DISTRICT II
P.O. Drawer 00, 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
Lease - 3 Copies

070 Farmington ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-30711		² Pool Code 71599	³ Pool Name BASIN DAKOTA	⁴ Well Number 1M
⁵ Property Code 22671	⁶ Property Name CHAVEZ GAS COM "C"			⁷ Elevation 5599'
⁸ OGRIID No. 167067	⁹ Operator Name CROSS TIMBERS OPERATING CO.			

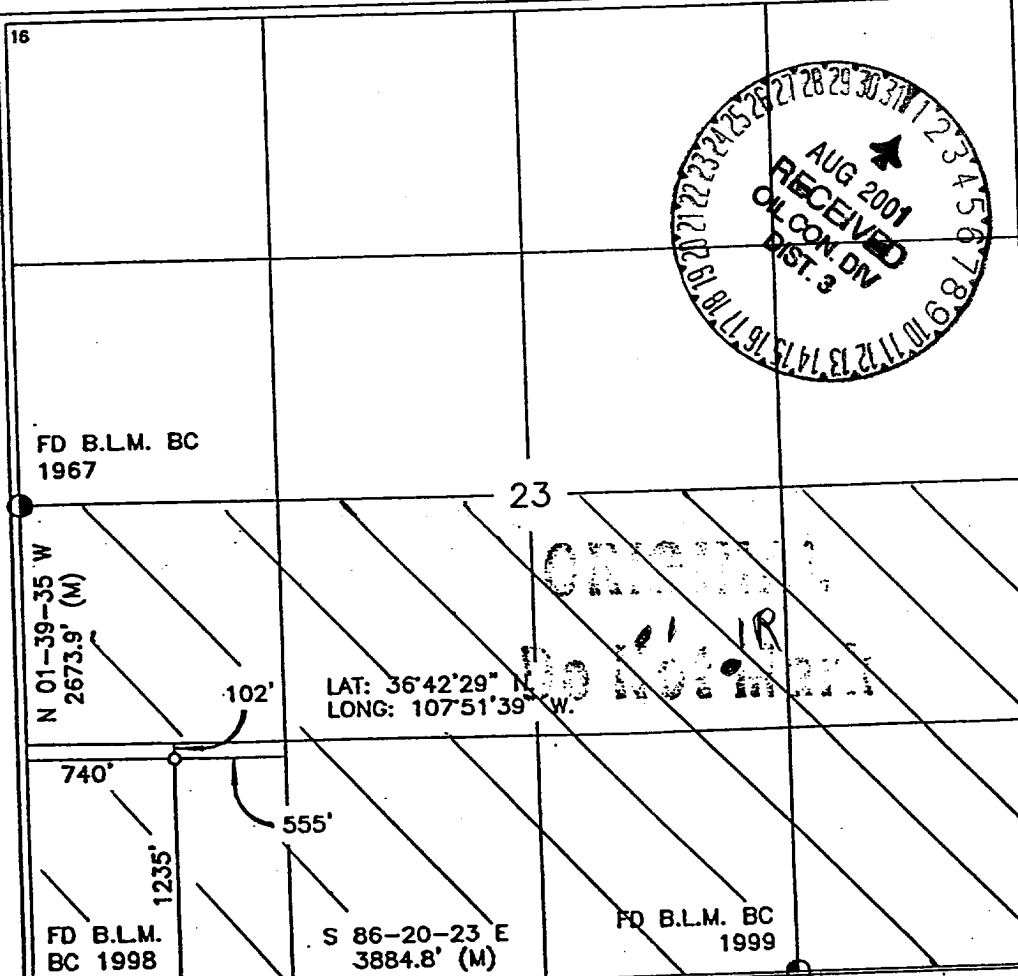
¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	23	29-N	10-W		1235'	SOUTH	740'	WEST	SAN JUAN

¹¹Bottom 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 320 S/2		¹³ Joint or Infill I		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

	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p>Signature <u>Jeffrey W Patton</u></p> <p>Printed Name <u>JEFFREY W PATTON</u></p> <p>Title <u>DRILLING ENGINEER</u></p> <p>Date <u>5-16-01</u></p>
	<p>18 SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Date of Survey <u>3-09-01</u></p> <p>Signature and Seal of Professional Surveyor <u>[Signature]</u></p> <p>Certificate Number <u>8894</u></p>

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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

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⁴ Property Code 22671		⁵ Property Name CHAVEZ GAS COM "C"			⁶ Well Number 1M
⁷ GRID No. 167067		⁸ Operator Name CROSS TIMBERS OPERATING CO.			⁹ Elevation 5599'

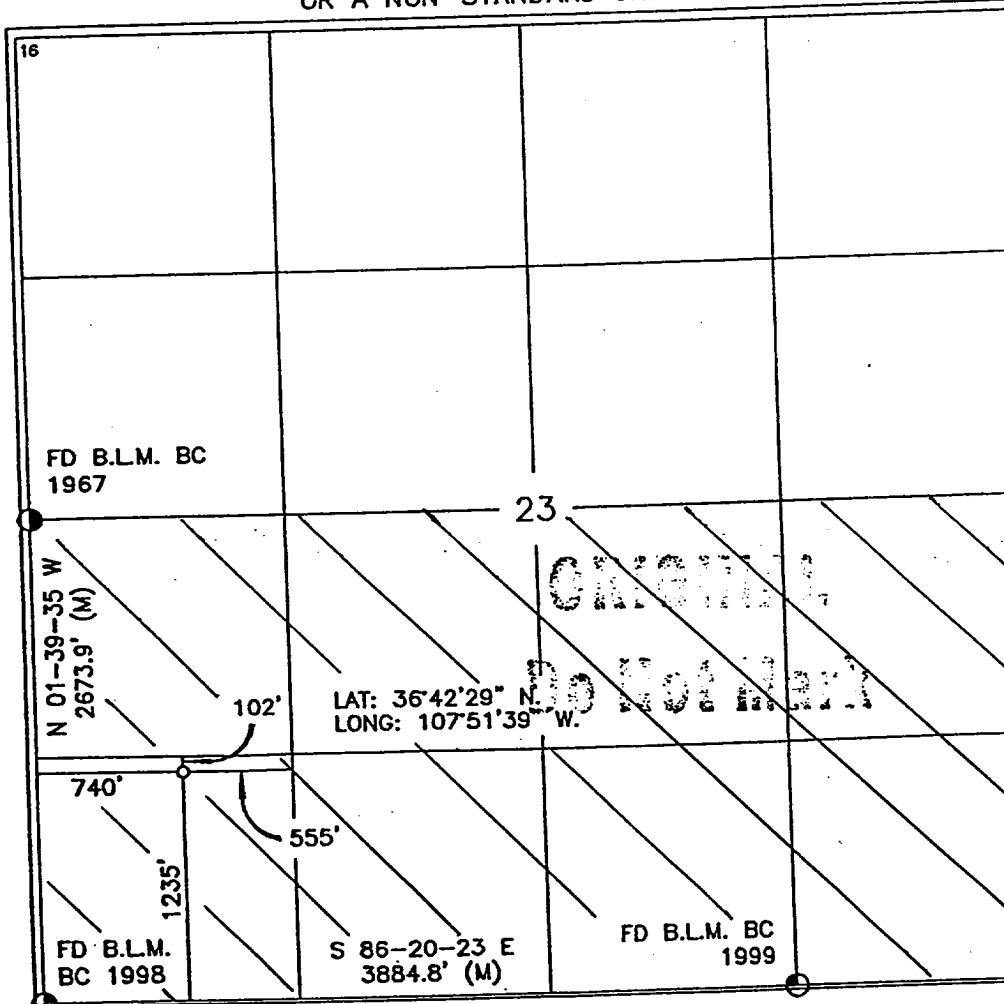
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17 OPERATOR CERTIFICATION

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

Signature Jeffrey W Patton
Printed Name JEFFREY W PATTON
Title DRILLING ENGINEER
Date 5-16-01

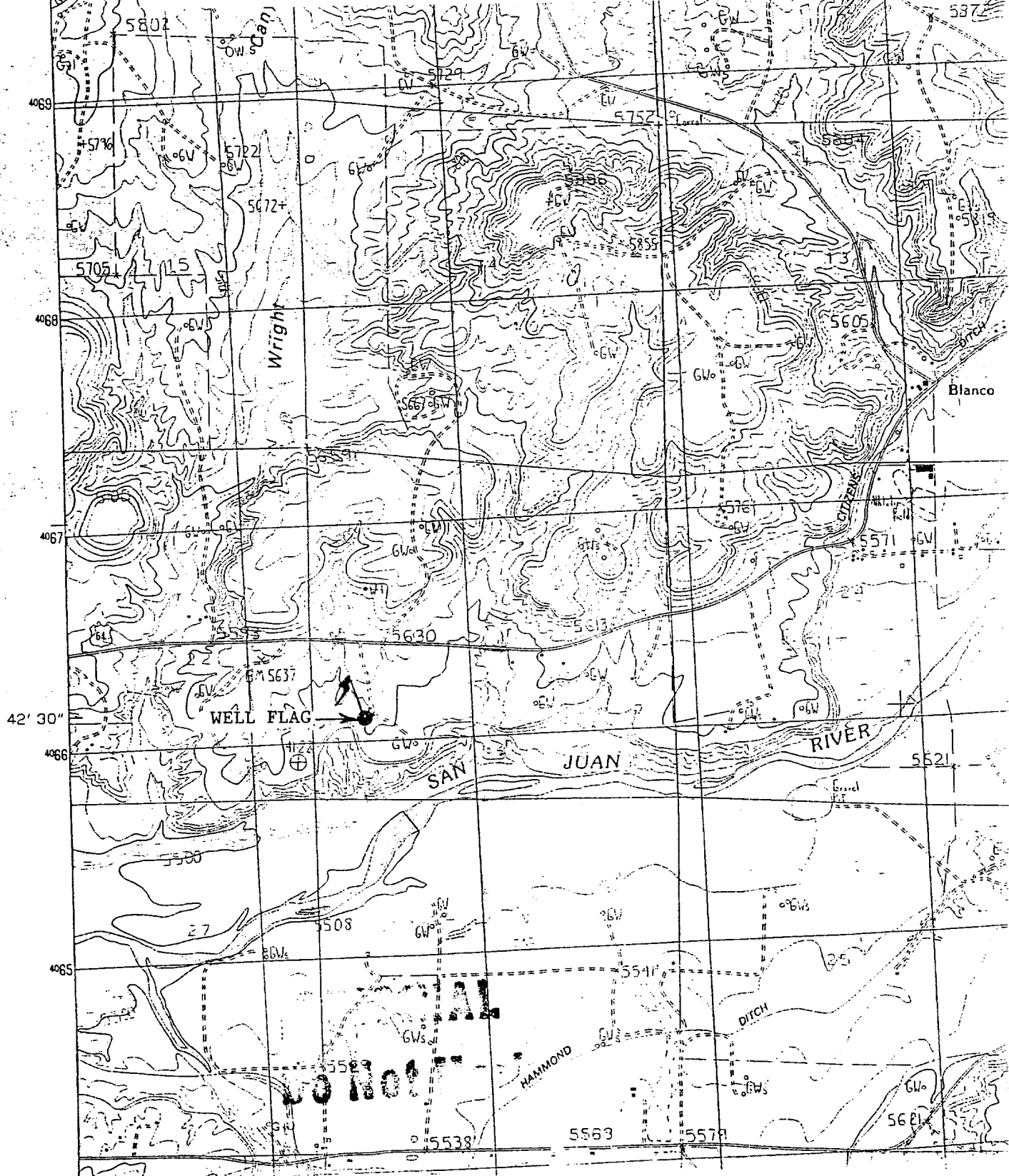
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I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey 3-09-01
Signature and Seal of Professional Surveyor ROY A. RUSH
8894
Certificate Number

CROS TIMBERS OPERATING COMPANY
CHAVEZ GAS COM "C" #1M
SW/4 SEC. 23, T-29-N, R-10-W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
1235' FSL 740' FWL

4070000m



CROSS TIMBERS OPERATING COMPANY

"Chavez Gas Com "C" #1M"

APD Data

June 20, 2001

Location: Sec 23, T29N, R10W

County: San Juan

State: New Mexico

GREATEST PROJECTED TD: 6,850'
APPROX GR ELEV: 5,599'

OBJECTIVE: Basin Dakota / Blanco Mesaverde
Est KB ELEV: 5,611' (12' AGL)

1. MUD PROGRAM:

INTERVAL	0' to 350'	350' to 4,500'	4,500' to TD
HOLE SIZE	12-1/4"	7-7/8"	7-7/8"
MUD TYPE	FW/Spud Mud	FW/Polymer	PolyPlus
WEIGHT	8.6-9.0	8.4-8.8	8.6-9.0
VISCOSITY	28-32	28-32	45-60
WATER LOSS	NC	NC	8-10

Remarks: Use fibrous materials as needed to control seepage and lost circulation. Pump high viscosity sweeps as needed for hole cleaning. Raise viscosity at TD for logging. Reduce viscosity after logging for cementing purposes.

2. CASING PROGRAM:

Surface Casing: 9-5/8" casing to be set at \pm 350' in 8.8 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'-350'	350'	36#	H-40	STC	1740	2560	294	8.921	8.765	7.32	7.95	29.39

Production Casing: 4-1/2" casing to be set at TD in 9.0 ppg mud.

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'-TD	6,850'	10.5#	J-55	STC	4010	4790	132	4.052	3.875	1.66	1.33	2.44

3. WELLHEAD:

- Casing Head: Larkin Fig 92 (or equivalent), 9" nominal, 2,000 psig WP (4,000 psig test) with 9-5/8" 8rnd thread on bottom and 11-3/4" 8rnd thread on top.
- Tubing Head: Larkin Fig 612 (or equivalent), 6.456" nominal, 2,000 psig WP (4,000 psig test), 4-1/2" 8rnd female thread on bottom, 8-5/8" 8rnd thread on top.

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

A. Surface: 9-5/8", 36#, H-40, STC casing to be set at $\pm 350'$.

Lead: 185 sx of Class "B" cement (or equivalent) containing 2% CaCl_2 , ¼ pps celloflake, mixed at 15.6 ppg, 1.18 ft³/sk, & 5.20 gal wtr/sk.

Total slurry volume is 220 ft³, 100% excess of calculated annular volume to 350'.

B. Production: 4-1/2", 10.5#, J-55, STC casing to be set at $\pm 6,850'$.

480 sx of Lite-Crete cement (proprietary blend) containing ¼ pps celloflake mixed at 9.5 ppg, 2.52 ft³/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, 1.71 cuft/sx, 9.85 gal/sx.

Total estimated slurry volume for the 4-1/2" production casing is 1,550 ft³ (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 3,300' to TD (6,850').

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 2,800'. Formation Micro Imager (FMI) will be run on most wells from TD to $\pm 6,300'$.

6. FORMATION TOPS:

Est. KB Elevation: 5,599'

Formation	Subsea Depth	Well Depth
Farmington Sandstone	+4453'	1158'
Fruitland Formation	+4016'	1595'
Lower Fruitland Coal	+3699'	1912'
Pictured Cliffs SS	+3674'	1937'
Lewis Shale	+3446'	2165'



Cross Timbers Operating Company

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

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.

TESTING PROCEDURE

