

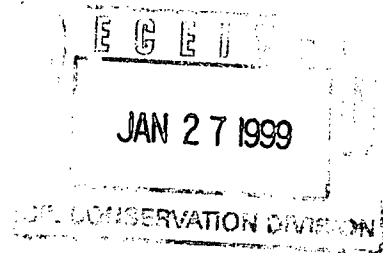


Cross Timbers Operating Company

January 22, 1999

Ms. Lori Wrotenbery
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

2250



Re: Administrative Approval to Downhole Commingle
Cross Timbers Operating Co.
Florance #70
2,035 FEL, 2,025' FSL Sec. 20, T27N, R08W (surface)
San Juan County, New Mexico

Dear Ms. Wrotenbery,

Cross Timbers Operating Company hereby request administrative approval to downhole commingle the South Blanco Pictured Cliffs and Basin Fruitland Coal pools in the above mentioned well.

This well was drilled and completed with a highly deviated wellbore (diagram included). Because of the well configuration, Cross Timbers Operating Co feels that the well will be unproductive using artificial lift to control liquid loading. Therefore to improve production, the well will require as much gas velocity as possible to recover liquids. The critical gas velocity can only be provided if both pools are allowed to produce up a single string of tubing together.

The well is a new completion and therefore it does not have any previous production. The allocation factors used for the gas and oil were derived from flow tests of each zone. The values obtained from those tests are indicated in the NMOCD form C-104 and BLM form 3160-4 (included with this application).

To comply with New Mexico Oil Conservation Rules, Cross Timbers Operating Co is submitting the following data for your approval of the proposed commingling:

1. C-107-A Application for Downhole Commingling
2. C-102 Well Location & Acreage Dedication Plat
3. Offset Operators Plat
4. Well Location Plat

In accordance with New Mexico Oil Conservation Division Rule 303C, all offset operators are being notified of this application by certified mail. As an offset operator, if you do not have any objections to this application, you do not have to respond to this notification.



Cross Timbers Operating Company

If additional information is needed, please feel free to contact Cross Timbers Oil Co.

Sincerely,

Jeffery W. Patton
Production Engineer

CC: NMOCD –Aztec, Offset Operators

DISTRICT I

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

DISTRICT II

811 S. First St., Artesia, NM 88210-2835

DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 875054-6429Form C-107-A
New 3-12-96

APPROVAL PROCESS:

___ Administrative ___ Hearing

EXISTING WELLBORE

X YES ___ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Cross Timbers Operating Company

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

Operator

Address

Florance

#70

J

Sec 20

T27N

R08W

San Juan, NM

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

OGRID NO. 167067

Property Code 022608

API NO. 3004529718

Spacing Unit Lease Types: (check 1 or more)
Federal X State ___ (and/or) Fee ___

The following facts are submitted in support of downhole commingling	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Basin Fruitland Coal 71629		Ballard Pictured Cliffs 71439
2. Top and Bottom of Pay Section (Perforations)	3,008' - 3,150' MD		3,203' - 3,235' MD
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) b. (Original) 818 pisa (calc)	a. b.	a. b. 276 psia (meas)
6. Oil Gravity (^o API) or Gas BTU Content)	1066		1153
7. Producing or Shut-In?	SI		SI
Production Marginal? (yes or no)	yes		yes
* If Shut-In, give date and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: n/a Rates: New zone	Date: Rates:	Date: n/a Rates: New zone
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula - % for each zone	Oil: 0% Gas: 13%	Oil: % Gas: %	Oil: 100% Gas: 87%

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? X Yes ___ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ___ Yes ___ No
Have all offset operators been given written notice of the proposed downhole commingling? X Yes ___ No11. Will cross-flow occur? X Yes ___ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. X Yes ___ No (If No, attach explanation)12. Are all produced fluids from all commingled zones compatible with each other? X Yes ___ No13. Will the value of production be decreased by commingling? ___ Yes X No (If Yes, attach explanation)14. If this well in on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. X Yes ___ No

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S) _____

16. ATTACHMENTS:

- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- * Production curve for each zone for at least one year. (If not available, attach explanation.)
- * For zones with no production history, estimated production rates and supporting data.
- * Data to support allocation method or formula.
- * Notification list of all offset operators.
- * Notification list of working, overriding, and royalty interests for uncommon interest cases.
- * Any additional statements, data, or documents required to support commingling.

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

SIGNATURE

TITLE Production Engineer

DATE 1-25-99

TYPE OR PRINT NAME Jeffery W. Patton

TELEPHONE NO. (505) 324-1090

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 S. 1st Street, Artesia, NM 88210-2834
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised October 18, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 3004529718	² Pool Code 71629 / 71439	³ Pool Name Basin Fruitland Coal / Ballard Pictured Cliffs
⁴ Property Code 022608	⁵ Property Name Florance	⁶ Well Number #70
⁷ OGRID No. 167067	⁸ Operator Name Cross Timbers Operating Company	⁹ Elevation 6777'

¹⁰ Surface Location									
UL or lot no. J	Section 20	Township 27N	Range 08W	Lot. Idn	Feet from the 2025	North/South Line South	Feet from the 2035	East/West line East	County San Juan, NM

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. P	Section 20	Township 27N	Range 08W	Lot. Idn	Feet from the 1188.9	North/South Line South	Feet from the 1008.7'	East/West line East	County San Juan, NM
¹² Dedicated Acres 320 / 160	¹³ Joint or Infill	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

				¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature Jeffery W. Patton Printed Name Production Engineer Title 1-23-99 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. NOVEMBER 3, 1998 Date of Survey Signature and Seal of Professional Surveyer: NEALE EDWARDS #6857 Certificate Number				



Cross Timbers Operating Company

Re: Administrative Approval to Downhole Commingle
Cross Timbers Operating Co.
Florance #70
2,035 FEL, 2,025' FSL Sec. 20, T27N, R08W (surface)
San Juan County, New Mexico

Dear Offset Operator,

As an offset operator to the above mentioned well, you are hereby notified that Cross Timbers Operating Co is filing for downhole commingle approval.

If you do not have any objections to the above well being commingled, you can either sign this letter waiving your rights to an objection or let the twenty days, upon receipt of this letter, expire.

Please return this letter or a letter of objection to Mr. David Catanach at the address listed.

Mr. David Catanach
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Cross Timbers Oil Co sincerely appreciate your prompt response concerning this approval.

M & G Drilling Company Inc.	Signature:
Amoco Production Company	Signature:
Burlington Resources Oil & Gas	Signature:
Robert L Bayless	Signature:



Cross Timbers Operating Company

Florance #70

**Offset Operator / Ownership Plat
South Blanco Pictured Cliffs / Basin Fruitland Coal
Downhole Commingle**

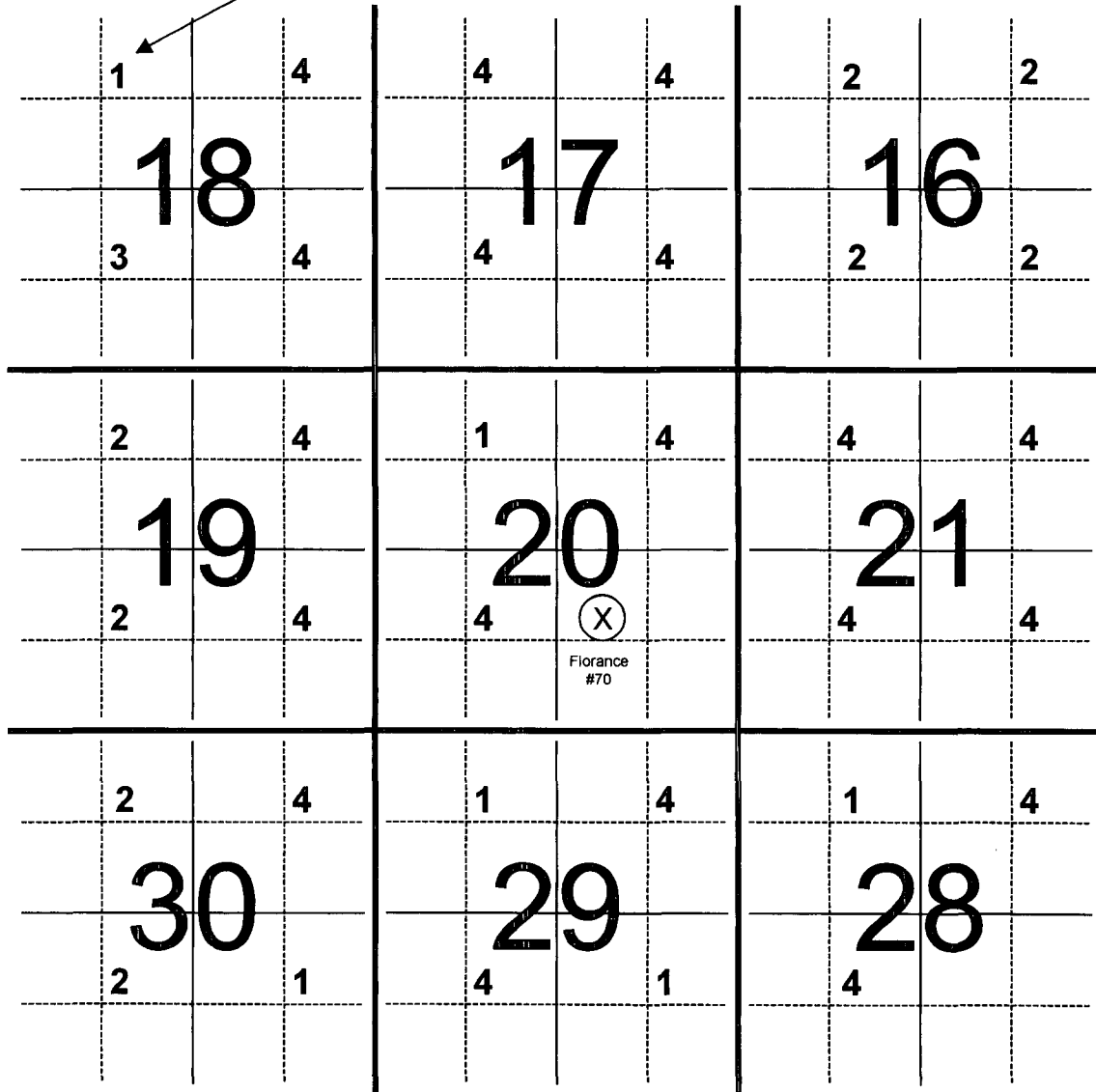
Township 27 N, Range 08 W

1. Amoco Production Company
200 Amoco Court
Farmington, NM 87401
2. Burlington Resources Oil & Gas Company
3535 E. 30th St.
Farmington, NM 87402
3. Robert L. Bayless
368 Hwy 170
Farmington, NM 87401
4. Cross Timbers Operating Co.
2700 Farmington Ave, Bldg K, Suite 1
Farmington, NM 87401



Cross Timbers Operating Company

Offset Operator as indicated on previous page



Township 27 N, Range 08 W

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____						5. LEASE DESIGNATION AND SERIAL NO. NM-03380	
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR ☐ Other _____						6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Cross Timbers Operating Company						7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. 2700 Farmington Ave., Bldg. K. Ste 1 Farmington, NM 87401						8. FARM OR LEASE NAME, WELL NO. Florance #70	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 2,025' FSL & 2,035' FEL Unit J At top prod. interval reported below 1,611' FSL & 1,516' FEL Unit J At total depth 1,188.9' FSL & 1,008.7" FEL Unit P						9. API WELL NO. 3004529718	
14. PERMIT NO.						DATE ISSUED	
15. DATE SPUDDED 11/15/98						16. DATE T.D. REACHED 11/21/98	
17. DATE COMPL. (Ready to prod.) 1/11/99						18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6,777' GL	
19. ELEV. CASINGHEAD						20. TOTAL DEPTH, MD & TVD 3385' MD 2997 TV	
21. PLUG, BACK T.D., MD & TVD 3318' MD 2940' TVD						22. IF MULTIPLE COMPL., HOW MANY* 2	
23. INTERVALS DRILLED BY						ROTARY TOOLS 0-3385' MD	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)* Basin Fruitland Coal 3008'-3150' MD 2677'-2797' TVD						25. WAS DIRECTIONAL SURVEY MADE yes	
26. TYPE ELECTRIC AND OTHER LOGS RUN GR, CCL, SP, Litho Density, Compensated Neutron & Array Induction						27. WAS WELL CORED no	
28. CASING RECORD (Report all strings set in well)							
CASING SIZE/GRADE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE	
8-5/8"		24#/ft		625' MD KB		12-1/4"	
4-1/2"		10.5#/ft		3383' MD KB		7-7/8"	
						B. Circ to surf.	
29. LINER RECORD							
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*	
30. TUBING RECORD							
SIZE		TOP (MD)		BOTTOM (MD)		PACKER SET (MD)	
2-3/8"						n/a	
31. PERFORATION RECORD (Interval, size and number) 3150'-3140' 3138', 3133'-31', 3127'-24' 19 holes 3065', 3064', 3060'-3045', 3011'-3008' 21 holes All shots were 1 JSPF. 0.34" dia holes (40 tt1 holes)				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
				DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED	
				3124'-3150'		500 gal Acid, 34000 gal foam frac	
				3008'-3065'		500 gal Acid, 34000 gal foam frac	
						(200,000# 16/30 Arizona sd total)	
33.* PRODUCTION							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump) Flowing				WELL STATUS (Producing or shut-in) SI	
DATE OF TEST 1/13/99		HOURS TESTED 9.25 hrs		CHOKE SIZE 1/2"		PROD'N. FOR TEST PERIOD	
						OIL - BBL. 0	
						GAS - MCF. 46	
						WATER - BBL. 19	
						GAS - OIL RATIO	
FLOW. TUBING PRESS. 135 psig		CASING PRESSURE 315 psig		CALCULATED 24-HOUR RATE		OIL - BBL. 0	
						GAS - MCF. 120	
						WATER - BBL. 49	
						OIL GRAVITY - API (CORR.)	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) To be sold						TEST WITNESSED BY Dusty Mecham	
35. LIST OF ATTACHMENTS							
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records							
SIGNED _____				TITLE Production Engineer		DATE 1/18/99	

*(See Instructions and Spaces for Additional Data 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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____						5. LEASE DESIGNATION AND SERIAL NO. NM-03380	
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR ☐ Other _____						6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Cross Timbers Operating Company						7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. 2700 Farmington Ave., Bldg. K. Ste 1 Farmington, NM 87401						8. FARM OR LEASE NAME, WELL NO. Florance #70	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 2,025' FSL & 2,035' FEL Unit J At top prod. interval reported below 1,293' FSL & 1,147' FEL Unit P At total depth 1,188.9' FSL & 1,008.7" FEL Unit P						9. API WELL NO. 3004529718	
14. PERMIT NO.						DATE ISSUED	
15. DATE SPUDDED 11/15/98						18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6,777' GL	
16. DATE T.D. REACHED 11/21/98						19. ELEV. CASINGHEAD	
17. DATE COMPL. (Ready to prod.) 1/11/99						20. TOTAL DEPTH, MD & TVD 3385' MD 2997 TV	
21. PLUG, BACK T.D., MD & TVD 3318' MD 2940' TVD						22. IF MULTIPLE COMPL., HOW MANY* 2	
23. INTERVALS DRILLED BY →						ROTARY TOOLS 0-3385' MD	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)* Ballard Pictured Cliffs 3203'-3235' MD 2842'-2869' TVD						25. WAS DIRECTIONAL SURVEY MADE yes	
26. TYPE ELECTRIC AND OTHER LOGS RUN GR, CCL, SP, Litho Density, Compensated Neutron & Array Induction						27. WAS WELL CORED no	
28. CASING RECORD (Report all strings set in well)							
CASING SIZE/GRADE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE	
8-5/8"		24#/ft		625' MD KB		12-1/4"	
4-1/2"		10.5#/ft		3383' MD KB		7-7/8"	
						365 sx Econolite & 200 sx C1	
						B. Circ to surf.	
29. LINER RECORD							
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*	
30. TUBING RECORD							
SIZE		TOP (MD)		BOTTOM (MD)		PACKER SET (MD)	
2-3/8"						3,212' MD KB	
31. PERFORATION RECORD (Interval, size and number) 3235', 3234', 3233', 3229', 3223', 3221', 3215', 3209', 3206', 3203'. 1 JSPF, 0.34" dia, 10 holes							
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.							
DEPTH INTERVAL (MD)				AMOUNT AND KIND OF MATERIAL USED			
3203'-3235'				500 gal 15% HCl acid w/20 Balls.			
				32500 gals 60Q foam w/60,000#			
				16/30 Arizona sd.			
33.* PRODUCTION							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump) Flowing				WELL STATUS (Producing or shut-in) SI	
DATE OF TEST 12-22-98		HOURS TESTED 22 hrs		CHOKE SIZE 3/4"		PROD'N. FOR TEST PERIOD →	
FLOW. TUBING PRESS. 55 psig		CASING PRESSURE 155 psig		CALCULATED 24-HOUR RATE →		OIL - BBL. 0	
						GAS - MCF. 731	
						WATER - BBL. 15	
						GAS - OIL RATIO	
						OIL GRAVITY - API (CORR.)	
						16 bbls	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) To be sold						TEST WITNESSED BY Dusty Mecham	
35. LIST OF ATTACHMENTS							
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records							

SIGNED _____

TITLE Production Engineer

DATE 1/18/99

*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38.

GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	TOP		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
Ojo Alamo	2033' TVD		SS			
Kirtland Shale	2109' TVD		Sh			
Fruitland	2554' TVD		SS			
Upper Coal	2691' TVD		Coal			
Middle Coal	2758' TVD		Coal			
Lower Coal	2821' TVD		Coal			
Pictured Cliffs	2827' TVD		SS			
Lewis Shale	2911' TVD		Sh			

FLORANCE #70 WELLBORE DIAGRAM

DATA

SURFACE LOCATION: 2.025' FSL & 2.035' FEL, UNIT J, SEC 20, T27N, R08W
 BOTTOMHOLE LOCATION: 1,200' FSL & 1,000' FEL, UNIT P, SEC 20, T27N, R08W
 COUNTY/STATE: SAN JUAN, NEW MEXICO
 FIELD: BASIN FRUITLAND COAL & BALLARD PICTURED CLIFFS
 FORMATION: FRUITLAND COAL / PICTURED CLIFFS
 NM LEASE#: NM-3880 API#: 30045XXXX CTOW WELL#: FC: XXXXX PC: XXXXX
 SPUD DATE: 11/16/98 COMPLETION DATE: 12/20/98

IP:

PRODUCTION METHOD: DK: FLWG GAS WELL GA: ROD PMP WELL.

TUBING STRING:

PERFS: PICTURED CLIFFS FRUITLAND COAL

HISTORY

11/16/98 CTOW SPUDDED WELL W/KEY ENERGY RIG 44. DRLG 12-1/4" HOLE. KB: 6,791'. GL: 6,777'.
 11/17/98 REACHED TD OF SURFACE PIPE HOLE @ 628' KB (MD & TVD). SET 8-5/8", 24.0#, J-55,
 ST&C CSG @ 624' KB. CMTD W/425 SX CLASS "B" W/2% CACL2 & 1/4 PPS CELLOFLAKE.

CIRC 20 BBLs CMT TO SURF.

11/18/98 KO @ 660' DRLG 7-7/8" DEVIATED HOLE USING BAKER INTEQ MWD.

11/21/98 REACHED TD OF 7-7/8" DEVIATED HOLE @ 3,385' KB MD (DRILLERS). 2,997' KB TVD.

ANGLE 32°. VERT SECT 1,324.02'. DIRECTION 128.4° ESE. COORDINATES -836', 1,026'.

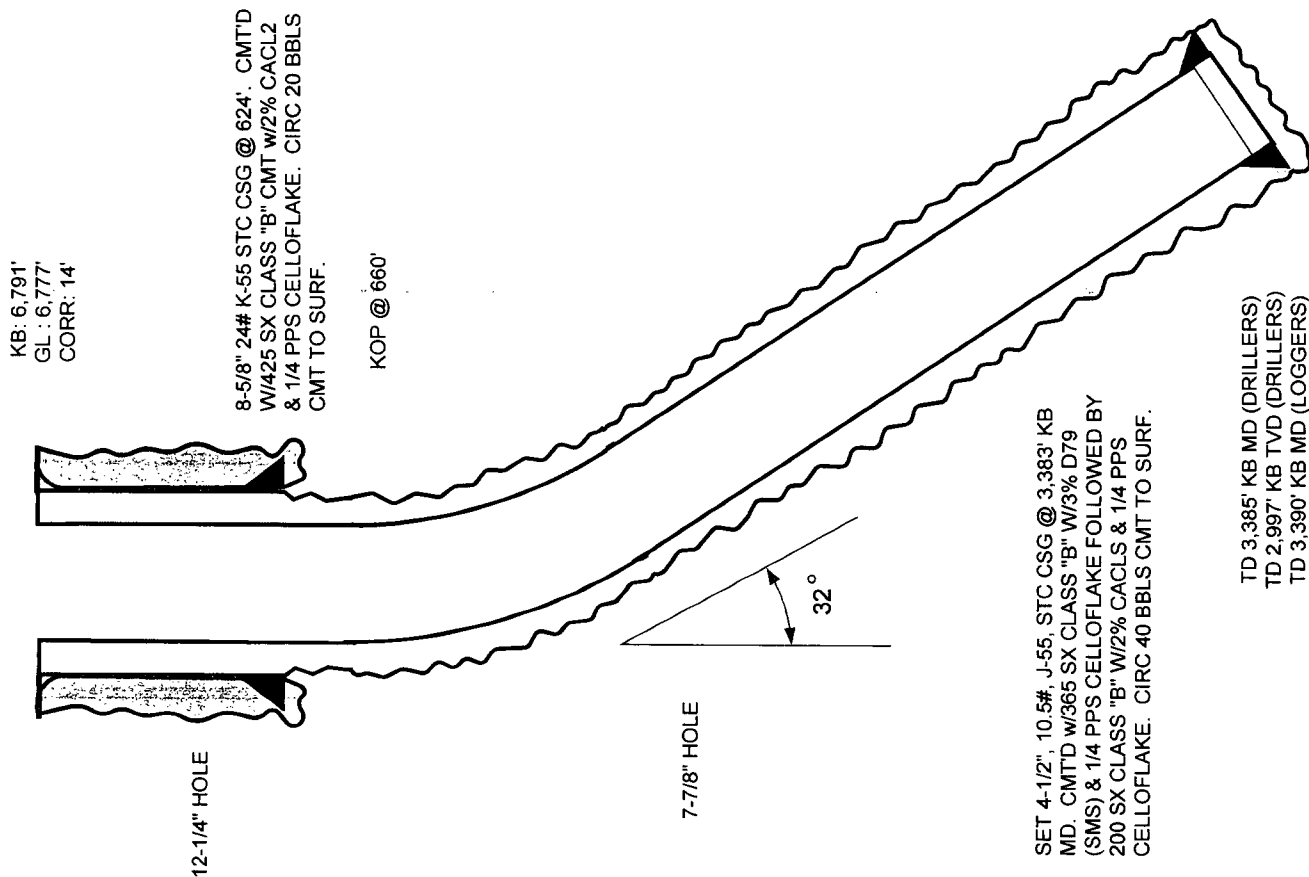
RAN PHASOR INDUCTION LITHO-DENSITY & COMPENSATED NEUTRON OH LOGS.

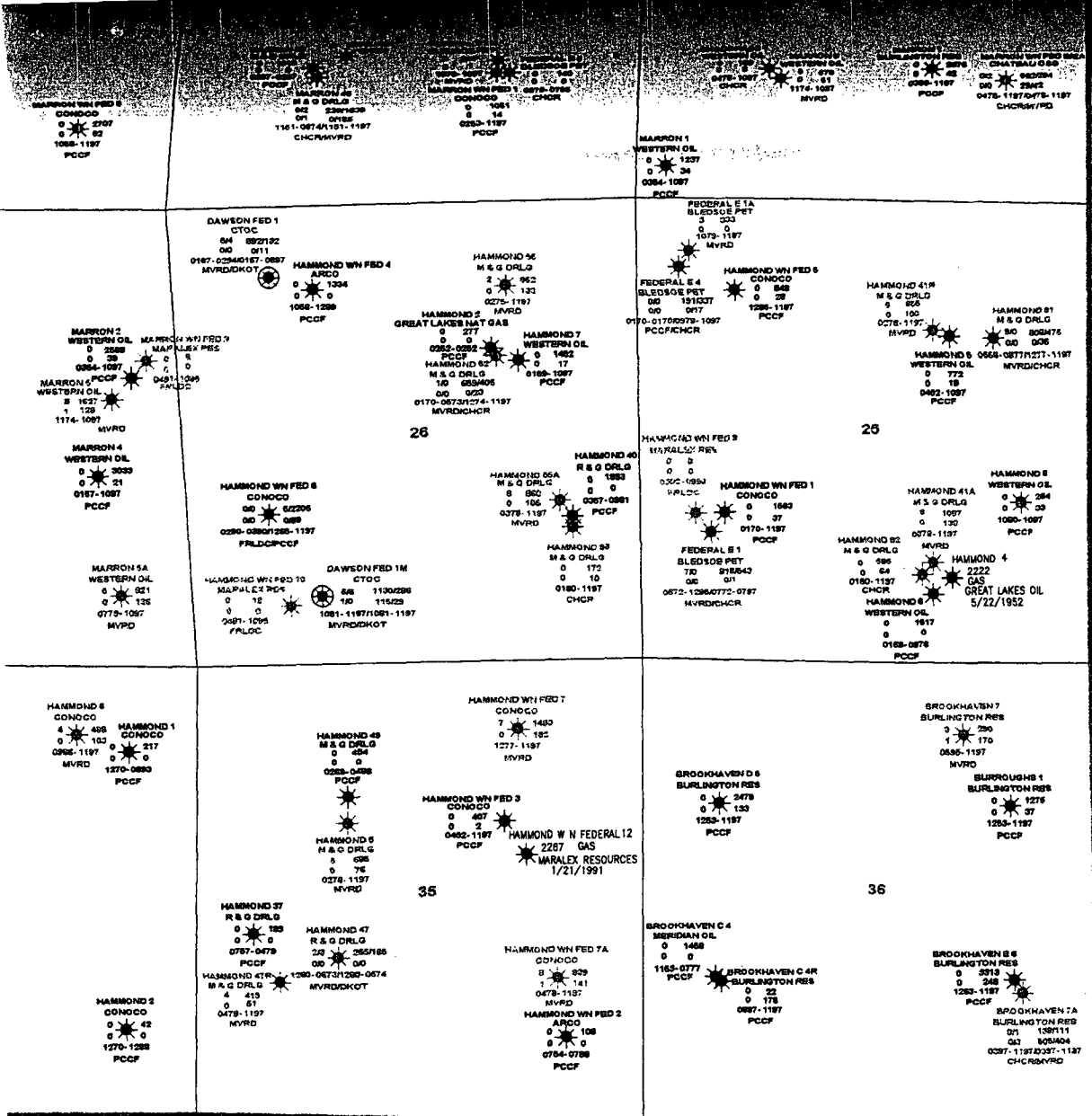
SET 4-1/2", 10.5#, J-55, STC CSG @ 3,383' KB MD. CMTD W/365 SX CLASS "B" CMT W/3%

D79 (SMS) & 1/4 PPS CELLOFLAKE FOLLOWED BY 200SX CLASS "B" CMT W/2% CACL2 & 1/4

PPS CELLOFLAKE. CIRC 40 BBLs CMT TO SURFACE.

11/22/98 RDMO KEY ENERGY RIG 44.





CROSS TIMBERS OIL COMPANY		
SAN JUAN BASIN WELLBORE REVIEW		
CUM PROD MAP		
T27N R08W		
Linda Weiss		7/24/98
Scale 1:24000	1" = 2000'	

BOLACK C LE 16A
CTOC

3 140
0 4R

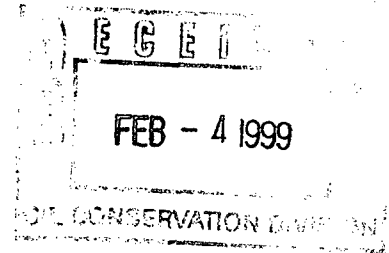
0729-1197
NVRD

BOLACK C LE 7
CTOC



Cross Timbers Operating Company

Re: Administrative Approval to Downhole Commingle
Cross Timbers Operating Co.
Florance #70
2,035 FEL, 2,025' FSL Sec. 20, T27N, R08W (surface)
San Juan County, New Mexico



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Santa Fe, New Mexico 87505

Cross Timbers Oil Co sincerely appreciate your prompt response concerning this approval.

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Amoco Production Company	Signature:
Burlington Resources Oil & Gas	Signature:
Robert L Bayless	Signature: 