

WELLS W/PRODUCTION

Operator
Well Name & Number
Cum Oil MBO
Cum Gas MMCF
Curr Rate Bopd
Start-End Date
Formation

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION
CROSS TIMBERS EXHIBIT NO. 1
CASE NO. 12524

CROSS TIMBERS OIL COMPANY		
SAN JUAN COUNTY, NEW MEXICO 9 SECTION 4-27N-10W DAKOTA PRODUCERS ONLY		
Johnny LeBon	B. Voigt	10/20/2000
Scale 1:24000.	1" = 2000'	4-27-10



Cross Timbers Oil Company

August 11, 2000

CERTIFIED MAIL

Mathias Family Trust Dated 9-9-81
Eugene P. Mathias and Barbara J.
Mathias, Trustees
452 Maidstone Lane
Thousand Oaks, CA 91320


RE: New Drill
Federal F #2E Well
E/2 Unit
SE/4 Section 4-27N-10W
San Juan County, New Mexico

Dear Working Interest Owner:

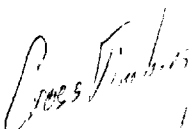
Cross Timbers Oil Company (CTOC) hereby proposes to drill the above captioned well to a depth of 6,850' to the Dakota Formation. Our proposed location is 1060' FSL and 1,805' FEL of the Section. Our records indicate that Mathias Family Trust dated 9-9-81 has a working interest of .6892%. Enclosed please find a copy of our AFE which provides for a dry hole cost of \$200,300 and a completed well cost of \$413,700.

Enclosed also please find a Joint Operating Agreement for this E2 Unit that covers the Dakota Formation. Please review the Agreement and should you elect to participate, forward a signed signature page along with an executed AFE to the undersigned. CTOC is prepared to drill this well as soon as possible, so your immediate response would be greatly appreciated. Should you have any questions, please feel free to contact me at (817) 885-2454.

Sincerely,
CROSS TIMBERS OIL COMPANY


George A. Cox, CPL
Landman

Enclosures


12-5-24



Cross Timbers Oil Company

August 24, 2000

Working Interest Owners
(See attached list)

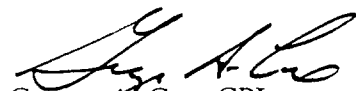
RE: Federal F #2E Well
E/2 Section 4-27N-10W
San Juan County, New Mexico

Dear Working Interest Owners:

On August 11, 2000 I sent you a well proposal along with an AFE and Joint Operating Agreement for the above captioned well. As of the date of this letter I have not received a signed Joint Operating Agreement and your election to join or go non-consent under the Joint Operating Agreement. Cross Timbers Oil Company is making plans to drill this well in the near future and we need to know your election pertaining to your interest in this well.

Please let me know if you have any questions concerning our proposal as soon as possible. I will need to make application with the NMOCD for a force pooling hearing and I will need to list any party who has not signed the Joint Operating Agreement and responded to our proposal. Please contact me as soon as possible.

Sincerely,
CROSS TIMBERS OIL COMPANY


George A. Cox, CPL
Landman

Cross Timbers
10524 3

WORKING INTEREST OWNERS
FEDERAL F #2E

Mathias Family Trust dtd 9-9-81
452 Maidstone Lane
Thousand Oaks, CA 91320

Virginia L. Mullin
1 Churchill Drive
Englewood, CO 80110

William L. Floyd, Jr.
16 East 77th Street, #5A
New York, New York 10021-1723

Richard P. Shooshan, Trustee
of the Shooshan Family Trust
686 E. Union St.
Pasadena, CA 91101-1820

Leon M. DuCharme Marital Trust
2617 South Wadsworth Circle
Lakewood, CO 80277-3220

Rita Mae DuCharme
2617 South Wadsworth Circle
Lakewood, CO 80277-3220

Rita Treasa Floyd, Jr.
8 Admiral Drive #236
Emeryville, CA 94608

Chateau Energy, Inc.
5950 Berkshire Ln #275
Dallas, TX 75225-5846



AUTHORITY FOR EXPENDITURE

AFE No. _____ Lease Name Federal "F"

Well No. #2E

Description SE/4 of Sec 4, T27N, R10W

County San Juan

State	New Mexico	Area	San Juan Division
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Operator	<u>CTOC</u>
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Project Drill & Complete a infill Dakota Gas Well

Prepared by JW Patton

Exploration	Development	X	Recompletion	T.D.
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6,850' TVD

Date 07/24/2000

24x xx

INTANGIBLE

TANGIBLE

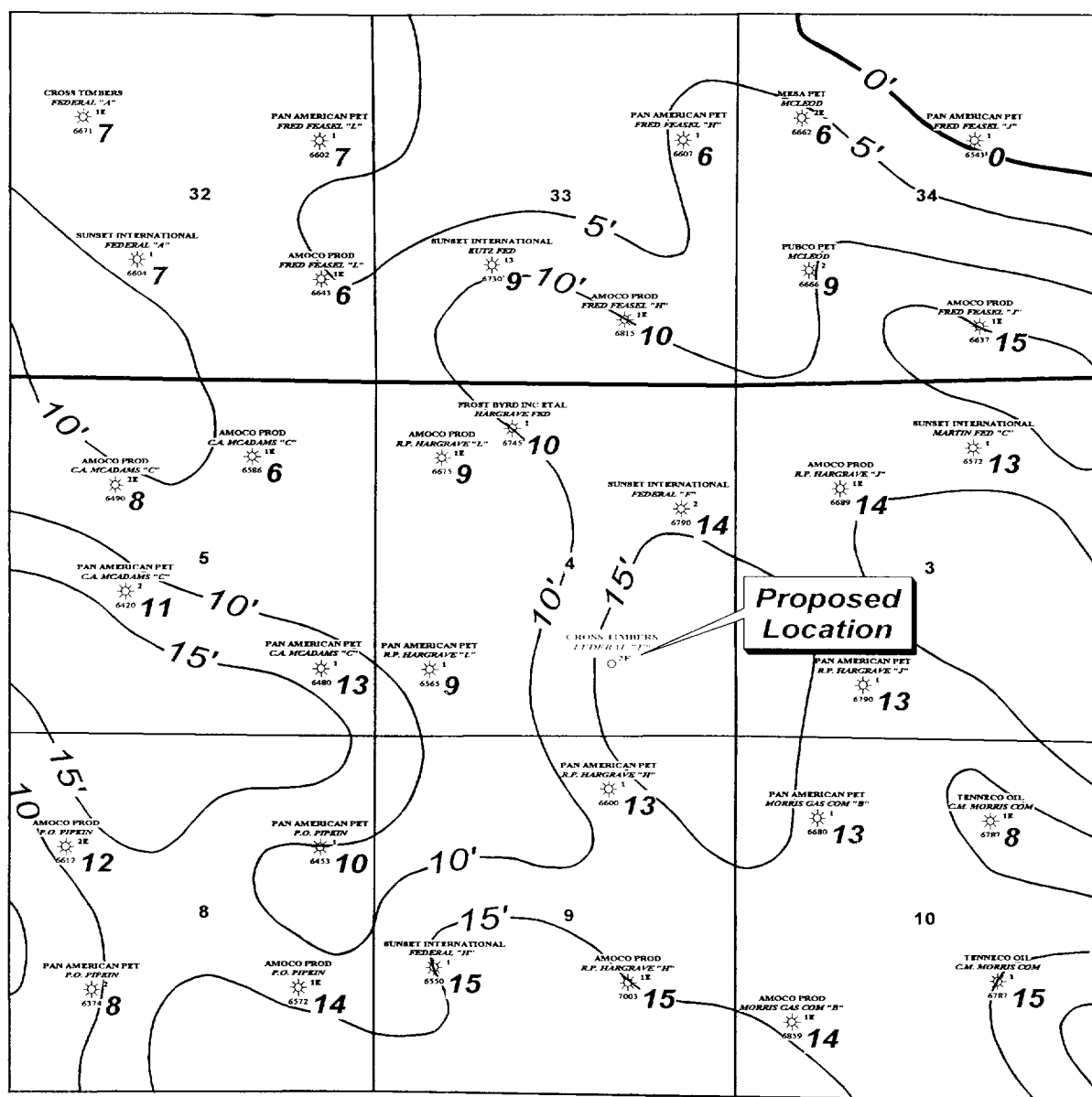
TOTAL

8-01	CONDUCTOR HOLE / RATHOLE			\$0
8-01	DAYWORK DRILLING 10 days @ \$6,300/day	\$63,000		\$63,000
8-01	FOOTAGE DRILLING			\$0
8-01	MOVING RIG	\$9,500		\$9,500
8-01	TURNKEY DRILLING			\$0
8-03	CONTRACT LABOR	\$4,000		\$4,000
8-04	TRUCKING	\$5,000		\$5,000
8-05	LOCATION / ROADS / PITS	\$12,000		\$12,000
8-06	MUD / CHEMICALS	\$10,000		\$10,000
8-06	WATER & WATERLINES (for drilling)	\$12,000		\$12,000
8-07	DST / WL FORMATION TESTING			\$0
8-08	OPEN HOLE LOGS	\$16,000		\$16,000
8-09	CEMENT & CEMENTING SERVICES	\$6,000		\$6,000
8-10	DRILL BITS 1- 12 1/4", 3 - 7 7/8" Bits	\$20,000		\$20,000
8-10	POWER & FUEL	\$2,000		\$2,000
8-11	CASING CREWS, TOOLS & TONGS			\$0
8-12	RENTAL TOOLS & EQUIPMENT	\$4,000		\$4,000
8-15	CORING & CORE ANALYSIS			\$0
8-16	PUMP TRUCKS & SERVICES			\$0
8-17	ENGINEERING / SUPERVISION 10 days @ \$500/day	\$5,000		\$5,000
8-18	MUD LOGGING UNIT	\$5,000		\$5,000
8-18	DIRECTIONAL TOOLS & SERVICE			\$0
8-18	FISHING TOOLS & SERVICE			\$0
8-21	LAND DAMAGES / LEGAL WORK	\$5,000		\$5,000
9-01	OVERHEAD 10 days @ \$300/day	\$3,000		\$3,000
9-01	CONDUCTOR PIPE			\$0
9-01	INTERMEDIATE CASING			\$0
9-01	SURFACE CASING 8-5/8" Surface Csg set @ 350'		\$2,800	\$2,800
9-03	BRADENHEAD		\$4,500	\$4,500
9-10	NON-CONT. TANG. EQUIP. DRLG.			\$0
CONTINGENCIES 5%		\$9,100	\$400	\$9,500
TOTAL COST TO CASING POINT		\$190,600	\$7,700	\$198,300
PLUG & ABANDONMENT		\$2,000		\$2,000
TOTAL COST IF DRY HOLE		\$192,600	\$7,700	\$200,300
8-02	COMPLETION UNIT 6 days @ \$2250/day	\$13,500		\$13,500
8-03	CONTRACT LABOR	\$5,000		\$5,000
8-03	INSTALLATION OF SERVICE EQUIPMENT			\$0
8-04	TRUCKING	\$5,000		\$5,000
8-05	FILL PITS & DRESS LOCATION	\$2,500		\$2,500
8-06	CHEMICAL PRODUCTS			\$0
8-06	WATER TRANSPORTS (DELIVERY & DISPOSAL)	\$5,000		\$5,000
8-07	CASED HOLE WIRELINE SERVICES	\$3,000		\$3,000
8-09	CEMENT & CEMENTING SERVICES	\$17,000		\$17,000
8-11	CASING CREWS, TOOLS & TONGS	\$4,000		\$4,000
8-11	RENTAL TOOLS & EQUIPMENT	\$5,000		\$5,000
8-15	FRAC PIT / LINER			\$0
8-15	FRAC TANK RENTALS & TANK TRUCKING (TO LOC.)	\$4,000		\$4,000
8-15	PUMP TRUCKS & SERVICES			\$0
8-15	STIMULATION SERVICES Dakota Frac	\$60,000		\$60,000
8-16	ENGINEERING / SUPERVISION 6 days @ \$500/day	\$3,000		\$3,000
8-18	FISHING TOOLS & SERVICES			\$0
8-18	LEGAL WORK			\$0
8-18	PLUG & ABANDONMENT			\$0
8-21	OVERHEAD 6 days @ \$300/day	\$1,800		\$1,800
9-01	PRODUCTION CASING / LINER 4-1/2", 10.5# Csg @ 6850'		\$25,700	\$25,700
9-02	TUBING 2-3/8" Tbg @ 6750'		\$15,200	\$15,200
9-03	TUBINGHEAD / X-MAS TREE		\$6,500	\$6,500
9-04	ARTIFICIAL LIFT EQUIPMENT		\$2,500	\$2,500
9-04	SUBSURFACE EQUIPMENT / SALVABLE			\$0
9-05	SEPARATION EQUIPMENT / GAUGES		\$10,000	\$10,000
9-05	TANKS / WALKS / STAIRWAYS		\$4,000	\$4,000
9-09	FLOWLINES & FITTINGS		\$4,500	\$4,500
9-10	NON-CONT. TANG. EQUIP. COMPL. EFM/MTR RUN		\$8,000	\$8,000
CONTINGENCIES 5%		\$6,400	\$3,800	\$10,200
TOTAL COST TO COMPLETE & EQUIP		\$135,200	\$80,200	\$215,400
TOTAL WELL COST		\$325,800	\$87,900	\$413,700

[illegible]

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SPECIAL EXAMINER STOOGER
 CALIFORNIA DEPARTMENT OF
 CORRECTIONS
 IDENTIFICATION DIVISION
 CROSS-TRUCKER IDENT NO. 9
 12524


Federal "F" #2E
SAN JUAN COUNTY, NEW MEXICO
1st. DAKOTA SANDSTONE
NET SANDSTONE ISOPACH

CONTOUR INTERVAL: 5'

DATE: NOVEMBER, 2000

SCALE

0' 2000'

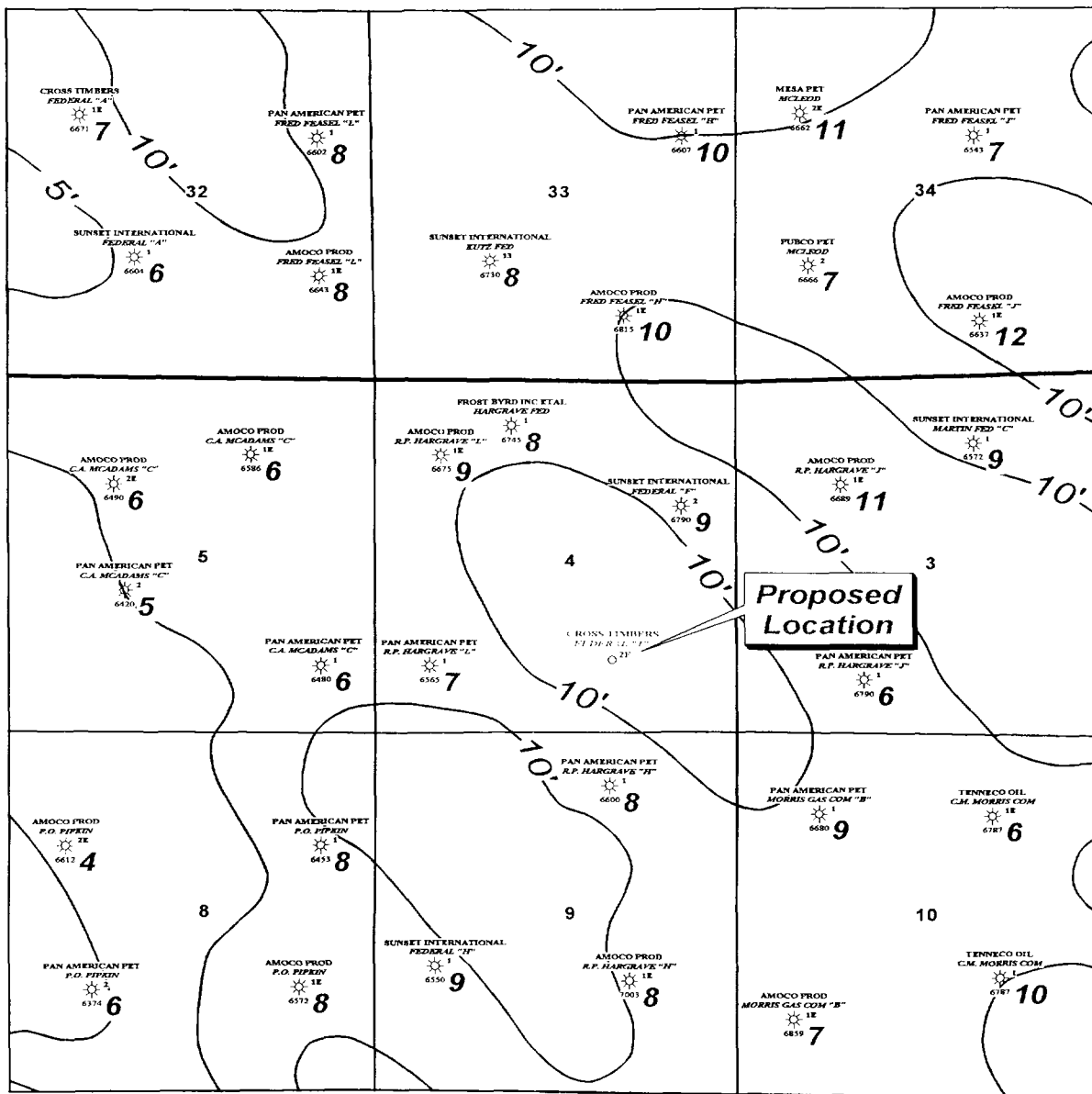


Cross Timbers Oil Company

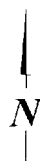
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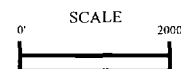
Cross Timbers
12524



Federal "F" #2E
SAN JUAN COUNTY, NEW MEXICO
2nd. DAKOTA SANDSTONE
NET SANDSTONE ISOPACH

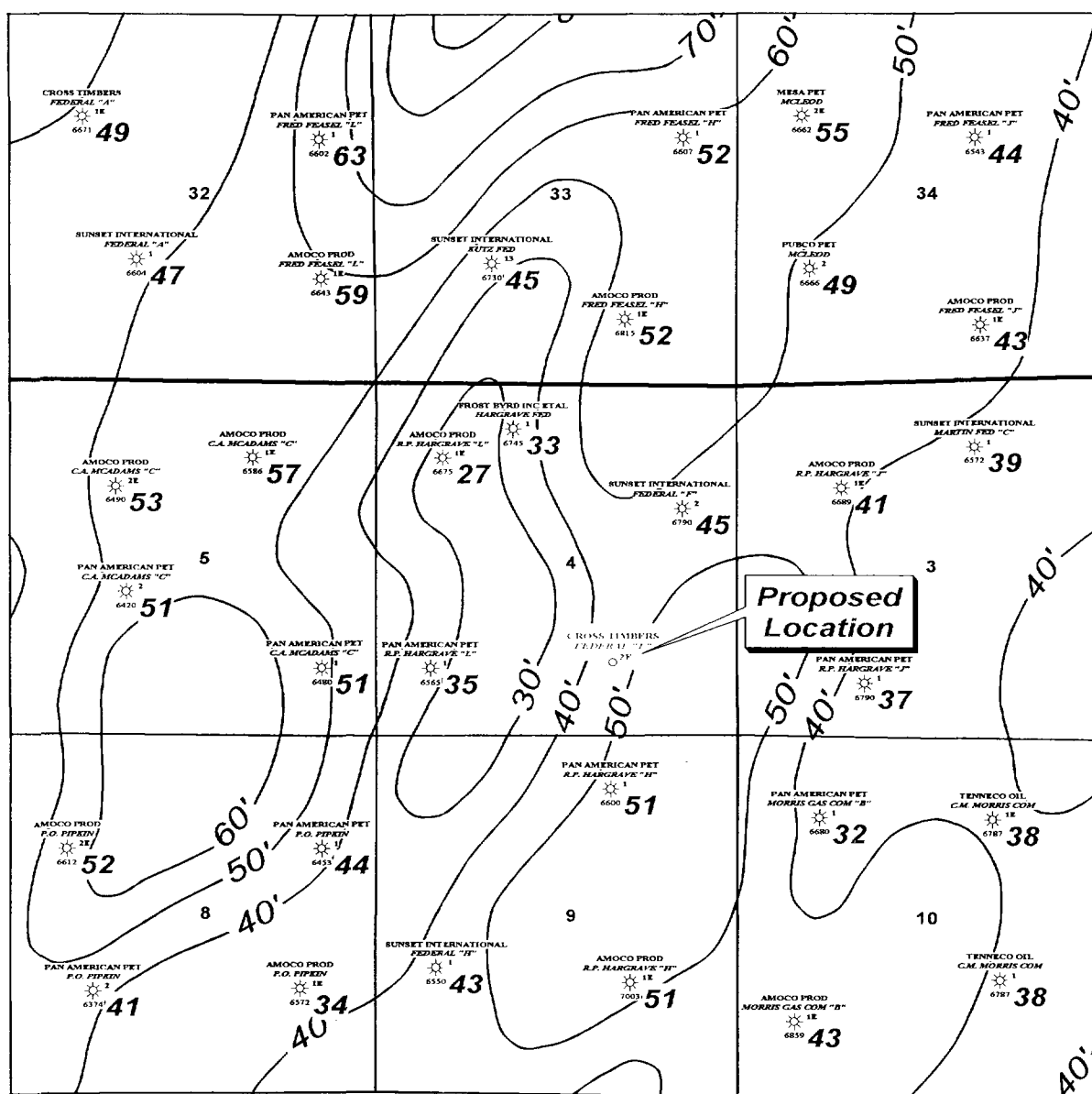
CONTOUR INTERVAL: 5'

DATE: NOVEMBER, 2000



Cross Timbers Oil Company

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CONTOUR INTERVAL: 10'

DATE: NOVEMBER, 2000

SCALE

2000

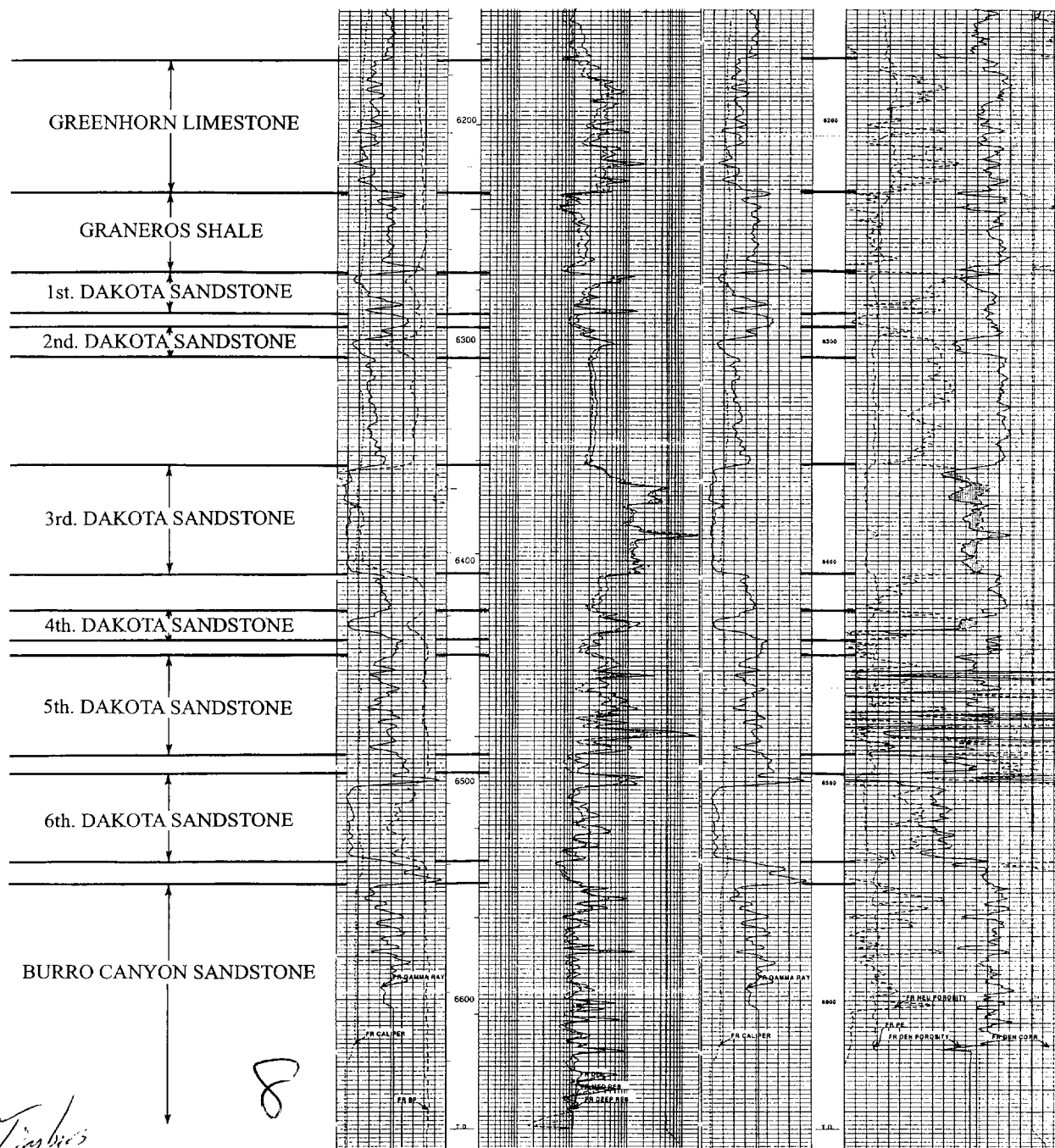


Cross Timbers Oil Company

Cross Timbers

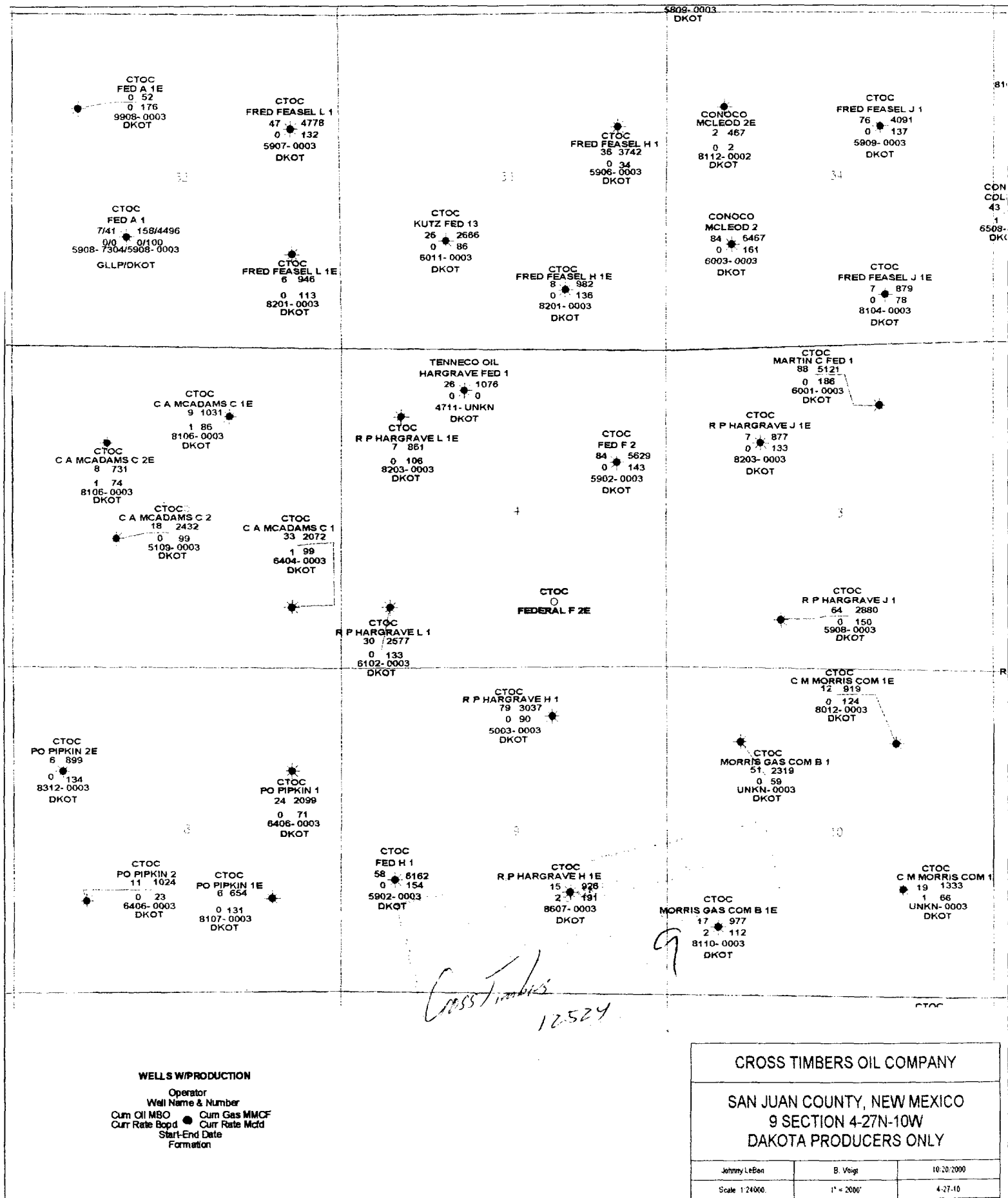
12527

1535' FNL & 1055' FWL
Section 32 T28N - R10W
San Juan County, New Mexico
KB: 5,895'



Cross Timbers

12524



BASIN DAKOTA
SECTION 4-T27N-R10W
1st SAND

Fluid Properties

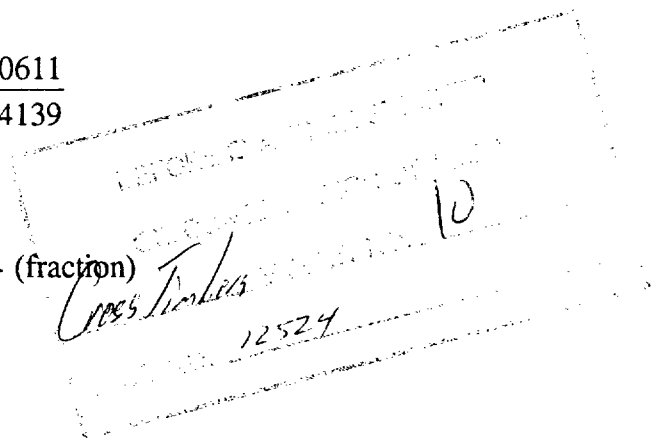
Gas Gravity	=	0.646	Gas Analysis
T _c	=	365°R	Standing's Correlation
P _c	=	678 psi	Standing's Correlation
T _r	=	150 °F	Log Measurement
P _{ri}	=	2,400 psi	Public Data
P _{ra}	=	400 psi	Estimate
B _{gi}	=	0.00611 ft ³ /SCF	Standing & Katz's Correlation
B _{ga}	=	0.04139 ft ³ /SCF	Standing & Katz's Correlation

Calculate Theoretical Recovery Factor:

$$RF_i = 1 - \frac{B_{gi}}{B_{ga}}$$

$$RF_i = 1 - \frac{0.00611}{0.04139}$$

$$RF_i = 0.8524 \text{ (fraction)}$$



Rock Properties

Acre - Feet	=	6,722	Planimetered from net sand thickness maps
Average Porosity	=	0.09	(Fraction) ϕ_{dn} Avg. of offsets
Water Saturation	=	0.44	(Fraction) Avg. of offsets

Calculate GIP, Theoretical and Actual EUR:

$$GIP = \frac{.04356Ah_{\phi}(1-S_w)}{B_{gi}} MMCF$$

$$GIP = \frac{.04356(6,722)(0.09)(1-0.44)}{0.00611} MMCF$$

$$GIP = 2,415 \text{ MMCF}$$

$$EUR_t = RF_t \times GIP$$

$$EUR_t = (0.8524)(2,415)$$

$$EUR_t = 2,059 \text{ MMCF}$$

BASIN DAKOTA
SECTION 4-T27N-R10W
2nd SAND

Fluid Properties

Gas Gravity	=	0.646	Gas Analysis
T _c	=	365°R	Standing's Correlation
P _c	=	678 psi	Standing's Correlation
T _r	=	150 °F	Log Measurement
P _{ri}	=	2,400 psi	Public Data
P _{ra}	=	400 psi	Estimate
B _{gi}	=	0.00611 ft ³ /SCF	Standing & Katz's Correlation
B _{ga}	=	0.04139 ft ³ /SCF	Standing & Katz's Correlation

Calculate Theoretical Recovery Factor:

$$RF_t = 1 - \frac{B_{gi}}{B_{ga}}$$

$$RF_t = 1 - \frac{0.00611}{0.04139}$$

$$RF_t = 0.8524 \text{ (fraction)}$$

Rock Properties

Acre - Feet	=	5,533	Planimetered from net sand thickness maps
Average Porosity	=	0.15	(Fraction) ϕ_{dn} Avg. of offsets
Water Saturation	=	0.35	(Fraction) Avg. of offsets

Calculate GIP, Theoretical and Actual EUR:

$$GIP = \frac{.04356Ah_{\phi}(1-S_w)}{B_{gi}} MMCF$$

$$GIP = \frac{.04356(5,533)(0.15)(1-0.35)}{0.00611} MMCF$$

$$GIP = 3,846 \text{ MMCF}$$

$$EUR_t = RF_t \times GIP$$

$$EUR_t = (0.8524)(3,846)$$

$$EUR_t = 3,278 \text{ MMCF}$$

BASIN DAKOTA
SECTION 4-T27N-R10W
3rd SAND

Fluid Properties

Gas Gravity

T_c	=	0.646
P_c	=	365°R
T_r	=	678 psi
P_{ri}	=	150 °F
P_{ra}	=	2,400 psi
B_{gi}	=	400 psi
B_{ga}	=	0.00611 ft ³ /SCF
	=	0.04139 ft ³ /SCF

Gas Analysis
Standing's Correlation
Standing's Correlation
Log Measurement
Public Data
Estimate
Standing & Katz's Correlation
Standing & Katz's Correlation

Calculate Theoretical Recovery Factor:

$$RF_i = 1 - \frac{B_{gi}}{B_{ga}}$$

$$RF_i = 1 - \frac{0.00611}{0.04139}$$

$$RF_i = 0.8524 \text{ (fraction)}$$

Rock Properties

Acre - Feet	=	24,451	Planimetered from net sand thickness maps
Average Porosity	=	0.09	(Fraction) ϕ_{dn} Avg. of offsets
Water Saturation	=	0.35	(Fraction) Avg. of offsets

Calculate GIP, Theoretical and Actual EUR:

$$GIP = \frac{.04356Ah_{\phi}(1-S_w)}{B_{gi}} MMCF$$

$$GIP = \frac{.04356(24,451)(0.09)(1-0.35)}{0.00611} MMCF$$

$$GIP = 10,198 \text{ MMCF}$$

$$EUR_t = RF_t \times GIP$$

$$EUR_t = (0.8524)(10,198)$$

$$EUR_t = 8,692 \text{ MMCF}$$