

**JAMES BRUCE**

ATTORNEY AT LAW

POST OFFICE BOX 1056  
SANTA FE, NEW MEXICO 87504

SUITE B  
612 OLD SANTA FE TRAIL  
SANTA FE, NEW MEXICO 87501

(505) 982-2043  
(505) 982-2151 (FAX)

February 15, 1999

Hand Delivered

Michael E. Stogner  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Dear Mr. Stogner:

Pursuant to Division Rule 104.F(2), Chi Energy, Inc. applies for administrative approval of an unorthodox gas well location for the following well:

Greenstone Fed. Com. Well No. 1  
Surface location: 480 feet FSL & 1650 feet FEL  
E½ S19, Township 20 South, Range 34 East, NMPM  
Lea County, New Mexico

Applicant requests a bottomhole location the same as the surface location, or in the alternative a location 760 feet from the South line and 1650 feet from the East line of the section. Alternative Form C-102's for the well are submitted as Exhibits A and B.

The well will be drilled to a total vertical depth of approximately 13,900 feet, to test the Morrow formation (Undesignated Mid-Bell Lake-Morrow Gas Pool). The pool is subject to statewide rules, requiring 320 acre well units, with wells located no closer than 1650 feet to the end boundary and 660 feet to the side boundary of the well unit, and no closer than 330 feet to a quarter-quarter section line.

The proposed location is based on potash and geologic reasons. The well is located in the oil-potash area, as defined by Division Order No. R-111-P. Applicant has been informed by the Bureau of Land Management that the only permissible surface location in the E½ of Section 19 is within 150 feet of the existing Yarbrough Oil Co. Lynch Fed. Well No. 1, located 330 feet from the South line and 1650 feet from the East line of Section 19. Thus, the surface location for the well must be at or near the proposed location.

BEFORE THE  
OIL CONSERVATION DIVISION  
Case No. 12158 Exhibit No. — 1  
Submitted By:  
Santa Fe Energy  
Hearing Date: April 15, 1999

Attached as Exhibit C is a net isopach map of the Lower Morrow Clastics, the main pay zone. The Morrow formation in this area is a narrow north-south trending sand bar. A well at the proposed location(s) is favorably situated geologically, and will encounter approximately 20-30 feet of net sand. As shown by the production data on Exhibit D, the structure map, this thickness is necessary to have a commercial well. Thus, a well at proposed location reduces the risk involved in drilling the well.

Applicant's alternate location would be obtained by directionally drilling approximately 280 feet north from the surface location. This can be done at reasonable cost. However, directionally drilling to an orthodox location (1650 feet from the South line of the section) is not desirable because it will increase the well's costs by approximately \$700,000.00, adversely affecting the well's economics.

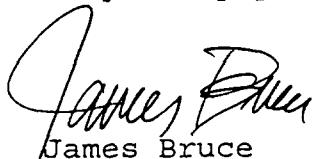
Attached as Exhibit E is a land plat of the area around the well. The lessees of the offsetting well units are as follows:

<u>Well Unit</u>	<u>Lessee</u>
W $\frac{1}{2}$ §19 & W $\frac{1}{2}$ §30	Santa Fe Energy Resources, Inc. Louis Dreyfus Natural Gas Corp. Southwestern Energy Production Company
E $\frac{1}{2}$ §30	Yates Petroleum Corporation Harvard Petroleum Corporation Santa Fe Energy Resources, Inc. Louis Dreyfus Natural Gas Corp. Southwestern Energy Production Company

Notice has been given to the offset lessees by the notice letter marked Exhibit F.

This application is submitted in duplicate. Please call me if you need anything further in this matter.

Very truly yours,

  
James Bruce

Attorney for Chi Energy, Inc.

DISTRICT II  
Denver 80, Artesia, NM 88211-0710

DISTRICT III  
1908 Rio Brazos Rd., Artesia, NM 87410

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
Property Code	Property Name GREENSTONE FEDERAL COM		Well Number 1
OGRID No.	Operator Name CHI OPERATING, INC.		Elevation 3658'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	19	20 S	34 E		480	SOUTH	1650	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	Joint or Infill	Consolidation Code	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>LOT 1 40.03 AC.</p> <p>LOT 2 40.06 AC.</p> <p>LOT 3 40.08 AC.</p> <p>LOT 4 40.11 AC.</p>	<p>3657.8' — 3658.0'</p> <p>3658.9' — 3660.7'</p> <p>480'</p> <p>1650'</p>		<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>John W. Qualls</i> Signature</p> <p>John W. Qualls Printed Name</p> <p>Geologist Title</p> <p>2-5-99 Date</p>
			<p><b>SURVEYOR CERTIFICATION</b></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>JANUARY 21, 1999</p> <p>Date Surveyed</p> <p>Signature <i>Gayle Johnson</i> Professional Surveyor</p> <p>NEW MEXICO 99-1-00821 REGISTERED PROFESSIONAL SURVEYOR</p> <p>CDG</p>
			<p>Candidate No. RQMD 5-EDSON 3239 EDSON 12641</p>

**EXHIBIT**  
**A**

DISTRICT I  
P.O. Box 1000, Hobbs, NM 88241-1000

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1984  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

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Property Code	Property Name GREENSTONE FEDERAL COM	Well Number 1
OGBD No.	Operator Name CHI OPERATING, INC.	Elevation 3658'

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0	19	20 S	34 E		480	SOUTH	1650	EAST	LEA

Bottom Hole Location If Different From Surface

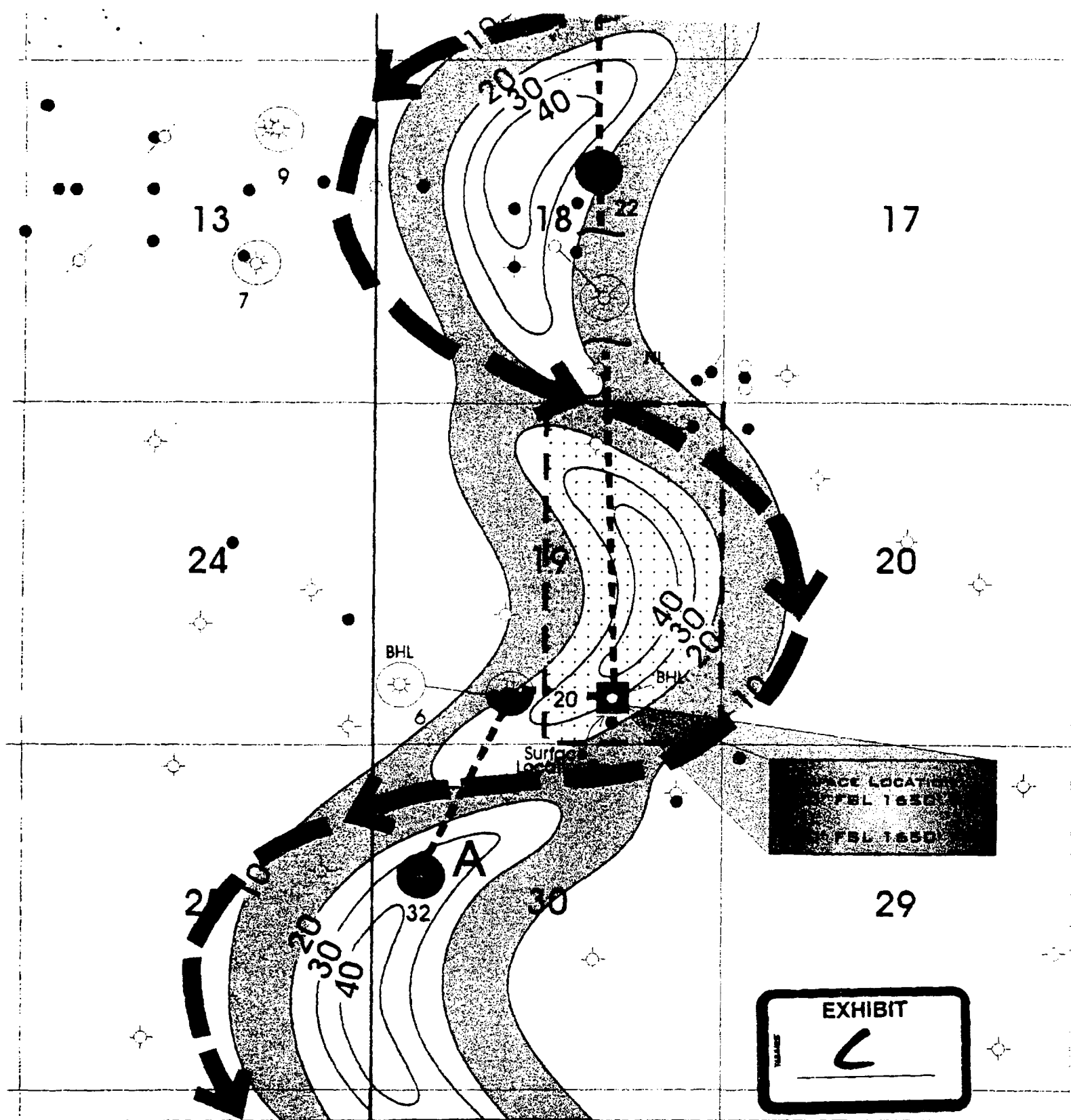
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	19	20 S	34 E		760	SOUTH	1650	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	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>LOT 1 40.03 AC.</p>					<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>John W. Qualls</i> Signature</p> <p>John W. Qualls Printed Name</p> <p>Geologist Title</p> <p>2-5-99 Date</p> <hr/> <p><b>SURVEYOR CERTIFICATION</b></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>JANUARY 21, 1999</p> <p>Date Surveyed</p> <p><i>Ronald G. Eidson</i> Signature &amp; Seal Professional Surveyor NEW MEXICO</p> <p>99-11-0065</p> <p>Certificate No. RONALD G. EIDSON 3239 PROFESSIONAL SURVEYOR 12541</p>
<p>LOT 2 40.06 AC.</p>					
<p>LOT 3 40.08 AC.</p>		<p>3657.8' — 3658.0'</p> <p>○</p> <p>3658.9' — 3660.7'</p> <p>DETAIL</p>			
<p>LOT 4 40.11 AC.</p>		<p>SEE DETAIL</p>			





**LEGEND:**

- Chi Energy, Inc. Acreage
- Lower Morrow Behind Pipe
- Proposed Proration Unit
- River Meander
- Lower Morrow Producer
- Toposed Location

*Chi Energy, Inc.*

**CS/Oxy Prospect**  
 Lea County, New Mexico  
**Isopach Map**  
 Lower Morrow Clastics  
 Net Clean Sand

Scale: 1" = 2000'      CI: 10'      Geol. C. Anderson

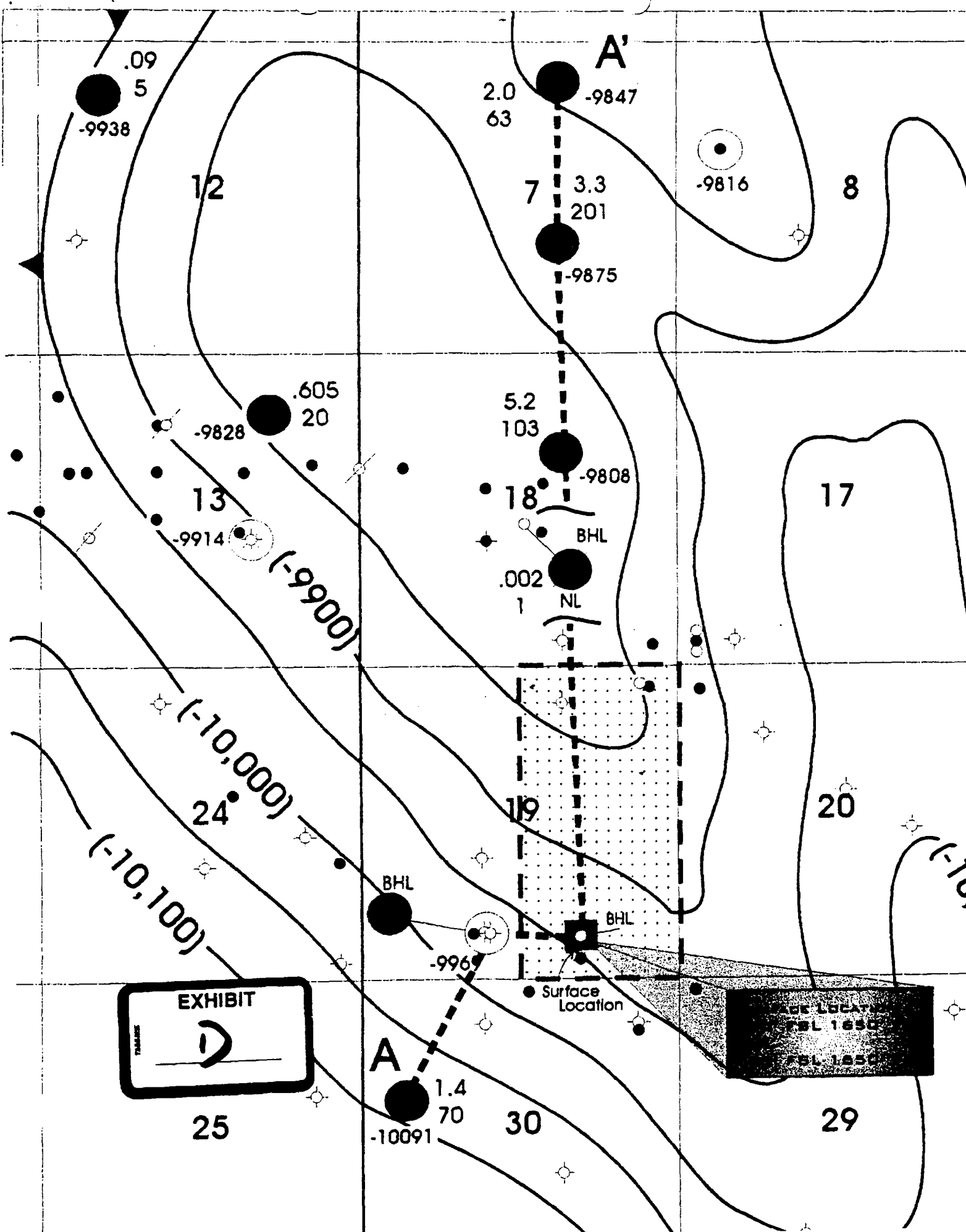


EXHIBIT  
 D  
 FRAME

SURFACE LOCATION  
 FBL 1850  
 FBL 1850

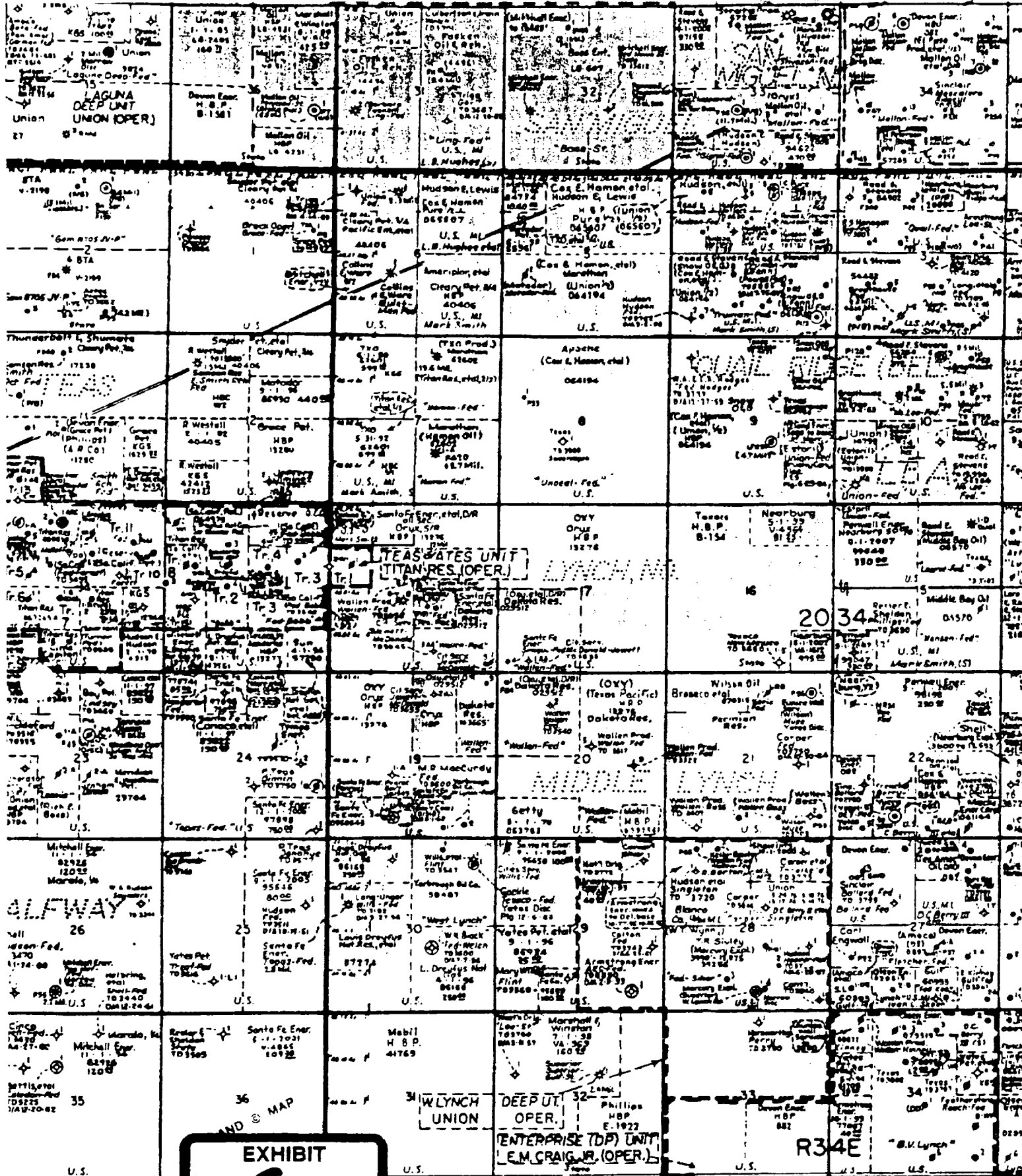


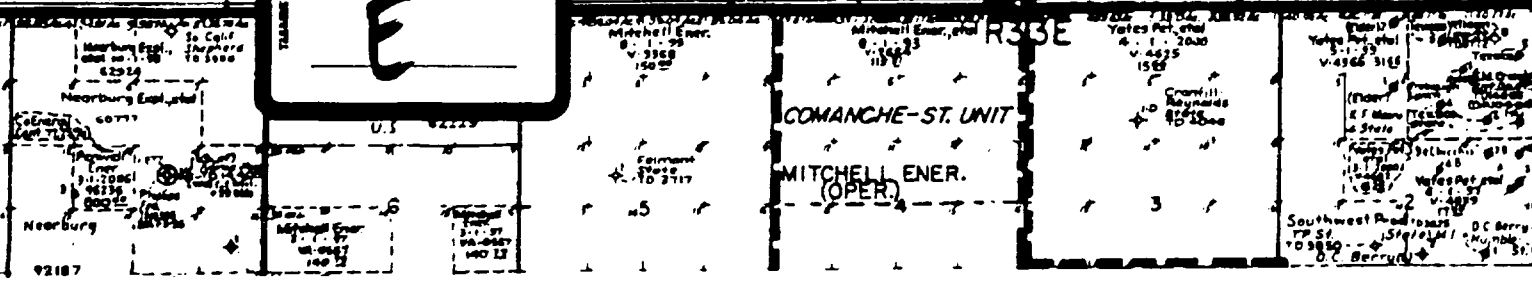
EXHIBIT  
**E**

WYLYNCH UNION  
DEEP UT. (OPER.)  
ENTERPRISE (DP) UNIT  
E.M. CRAIG, R. (OPER.)

R34E

COMANCHE-ST. UNIT  
MITCHELL ENER. (OPER.)

R33E



**JAMES BRUCE**

ATTORNEY AT LAW

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(505) 982-2043  
(505) 982-2151 (FAX)

February 15, 1999

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Santa Fe Energy Resources, Inc.  
Suite 1330  
550 West Texas  
Midland, Texas 79701  
Attention: Steven J. Smith

Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, New Mexico 88210

Louis Dreyfus Natural Gas Corp.  
Suite 600  
14000 Quail Springs Parkway  
Oklahoma City, Oklahoma 74134  
Attention: Joe W. Hammond

Harvard Petroleum Corp.  
P.O. Box 936  
Roswell, New Mexico 88202

Southwestern Energy Production Company  
Suite 300  
2350 North Sam Houston Parkway East  
Houston, Texas 77032  
Attention: Samuel Glenn Thompson

Dear Sirs:

Enclosed is a copy of an application for administrative approval of an unorthodox gas well location, filed with the New Mexico Oil Conservation Division by Chi Energy, Inc., regarding the E $\frac{1}{2}$  of Section 19, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Chi Energy's records indicate that you are an offset lessee to the proposed well. If you object to the application, you must notify the Division in writing no later than Monday, March 8, 1999. The Division's address is 2040 South Pacheco Street, Santa Fe, New Mexico 87505 (Attention: Michael E. Stogner).

Very truly yours,

  
James Bruce

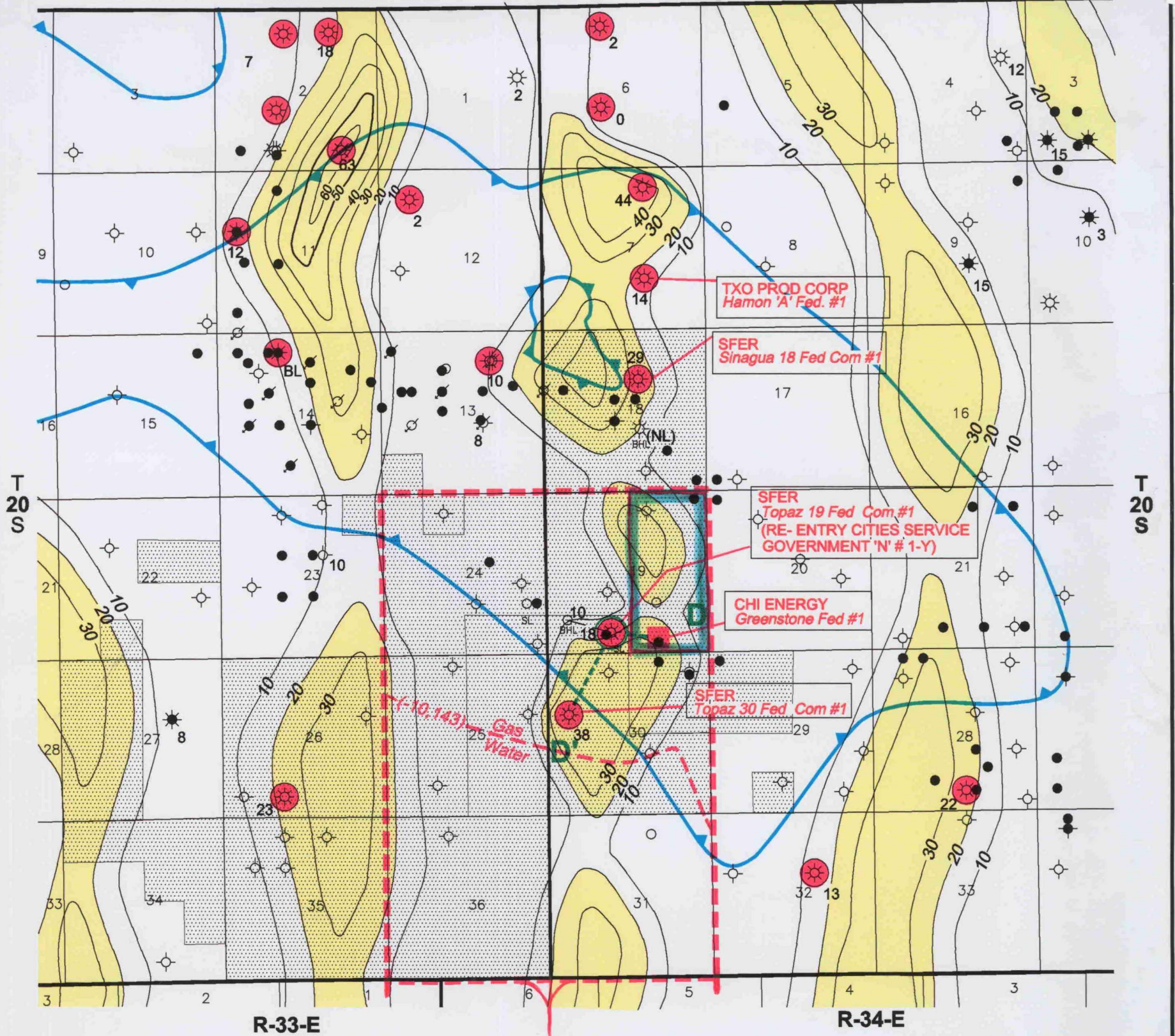
Attorney for Chi Energy, Inc.





R-33-E

R-34-E



☀️ — GULF OIL  
Minis #1

■ PROPOSED LOCATION

— MEASURED POTASH

--- TOPAZ OUTLINE


▨ SFER ACREAGE

BEFORE THE  
OIL CONSERVATION DIVISION

Case No. 12158 Exhibit No. 2  
Submitted By:  
*Santa Fe Energy*  
Hearing Date: April 15, 1999

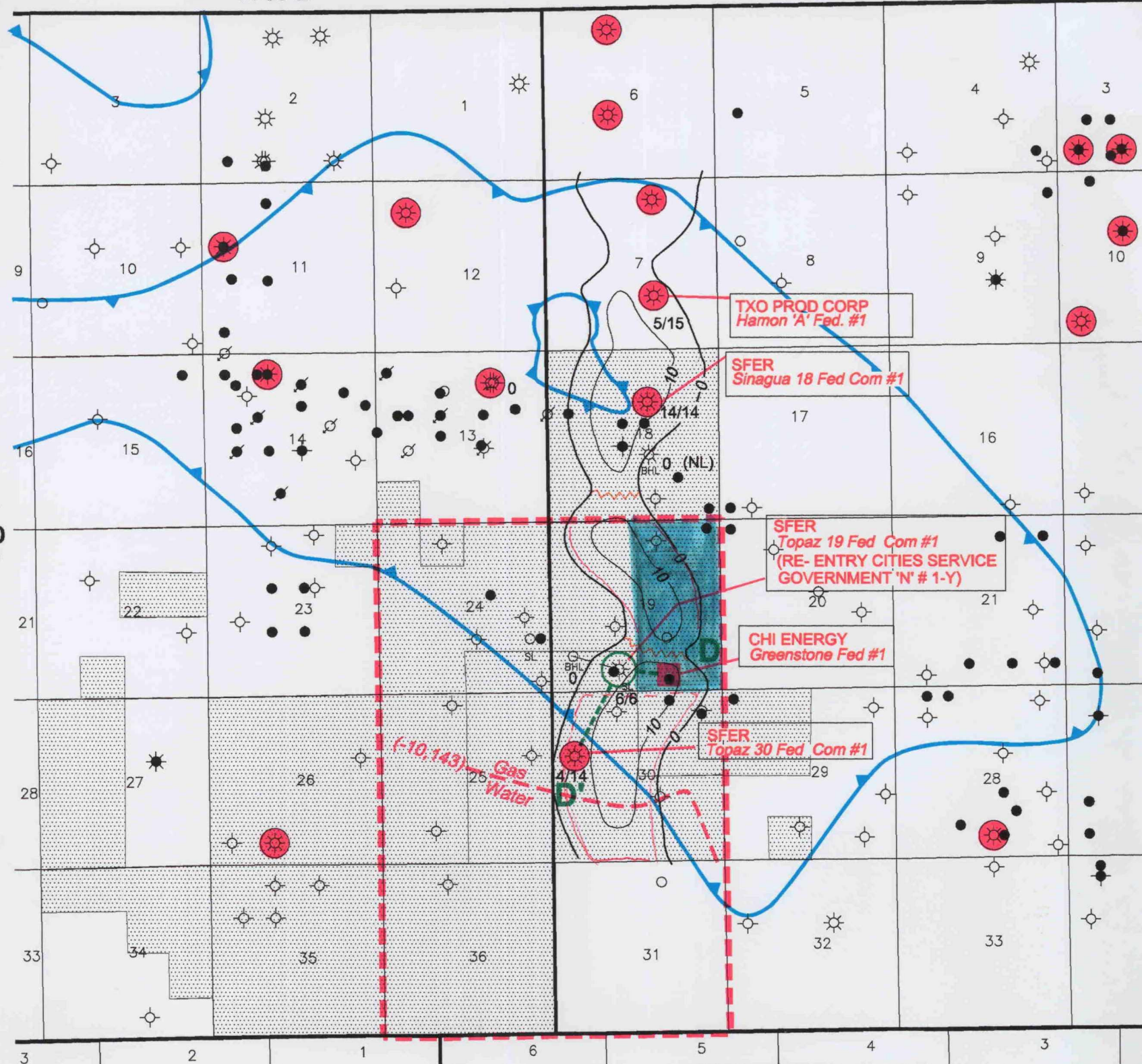
● MORROW PRODUCER



 <b>Santa Fe Energy Resources, Inc.</b> CENTRAL DIVISION MIDLAND, TEXAS	
Lea South Area <b>TOPAZ PROSPECT</b> Lea County, New Mexico	
<b>ISOPACH LOWER MORROW GROSS SAND</b>	
Geol.: T. J. Tinney Scale: 1" = 4000'	C.I.: 10' Date: 4-12-99
TOPAZ-4.DWG	

R-33-E

R-34-E

T  
20  
ST  
20  
S

PERMEABILITY BARRIER R-33-E

MORROW PRODUCER

PROPOSED LOCATION

MEASURED POTASH

TOPAZ OUTLINE

SFER ACREAGE

GULF OIL  
Minis #1

Net Pay ( $DØ \geq 8\%$ ,  $Sw < 40\%$ )

4/14

Net Sand ( $DØ \geq 8\%$ )

BEFORE THE  
OIL CONSERVATION DIVISION

Case No. 12158 Exhibit No. 3

Submitted By:

Santa Fe Energy

Hearing Date: April 15, 1999



Santa Fe Energy Resources, Inc.  
CENTRAL DIVISION  
MIDLAND, TEXAS

Lea South Area  
**TOPAZ PROSPECT**  
Lea County, New Mexico

NET PAY  
LOWER MORROW  
SAND

Geol.: T. J. Tinney  
Scale: 1" = 4000'

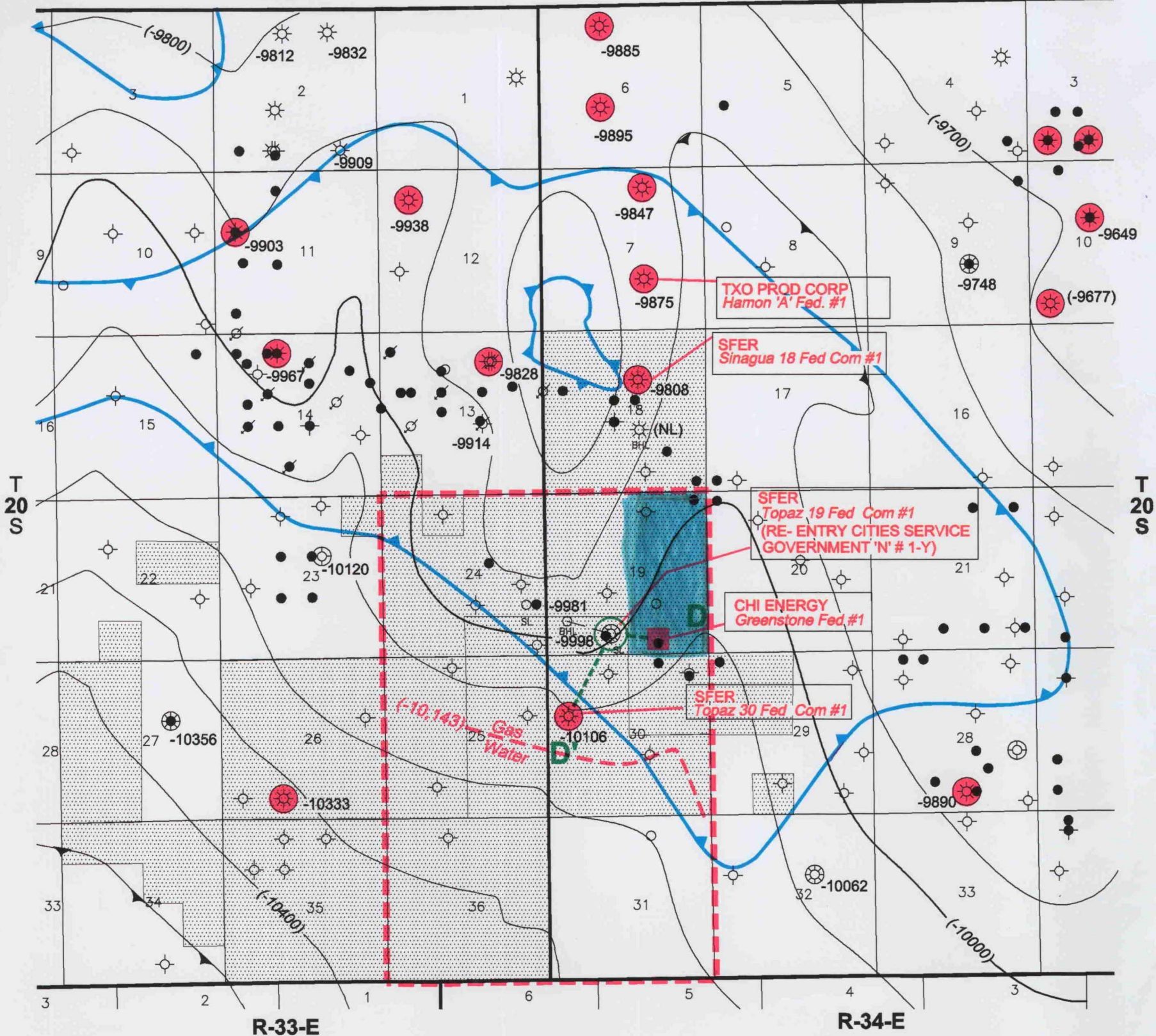
C.I.: 10'  
Date: 4-12-99






TOPAZ-4.DWG



R-33-E

R-34-E




-  MORROW PRODUCER
-  PROPOSED LOCATION
-  MEASURED POTASH
-  TOPAZ OUTLINE
-  SFER ACREAGE

 GULF OIL  
Minis #1

BEFORE THE  
OIL CONSERVATION DIVISION

Case No. 12158 Exhibit No. 4  
Submitted By:  
*Santa Fe Energy*  
Hearing Date: April 15, 1999



 Santa Fe Energy Resources, Inc. CENTRAL DIVISION MIDLAND, TEXAS	
Lea South Area <b>TOPAZ PROSPECT</b> Lea County, New Mexico	
<b>TOP OF LOWER MORROW</b>	
Geol.: T. J. Tinney Scale: 1" = 4000'	C.I.: 100' Date: 4-12-99
TOPAZ-4.DWG	

**LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE**

# Greenstone Fed Com #1 LX Reserve Calculation - Volumetrics

From Chi's Map

INTERVAL	ACRES	AC-FT
40	36	1432
30	60	1800
20	120	2400
10	104	1042
TOTAL	320	6674

$$GIP = 1.507 \times Por \times Ah \times (1 - Sw) \times Bhp/z \times 1/Bht-R$$

## Assume

porosity	9.0%
Sw	23%
BHP	6590
BHT F	192

## Calculations

Z	1.124
BHT-R	652
GIP: MMCF	6245

BEFORE THE  
OIL CONSERVATION DIVISION  
Case No. 12158 Exhibit No. 6  
Submitted By:  
*Santa Fe Energy*  
Hearing Date: April 15, 1999

wra 4/9/99

LEASE: GREENSTONE LX  
 FIELD: WILD CAT  
 RESERVOIR: MORROW  
 OPERATOR: CHI  
 DEVIATED HOLE

AFTER TAX ECONOMICS

AS OF DATE: 1/99

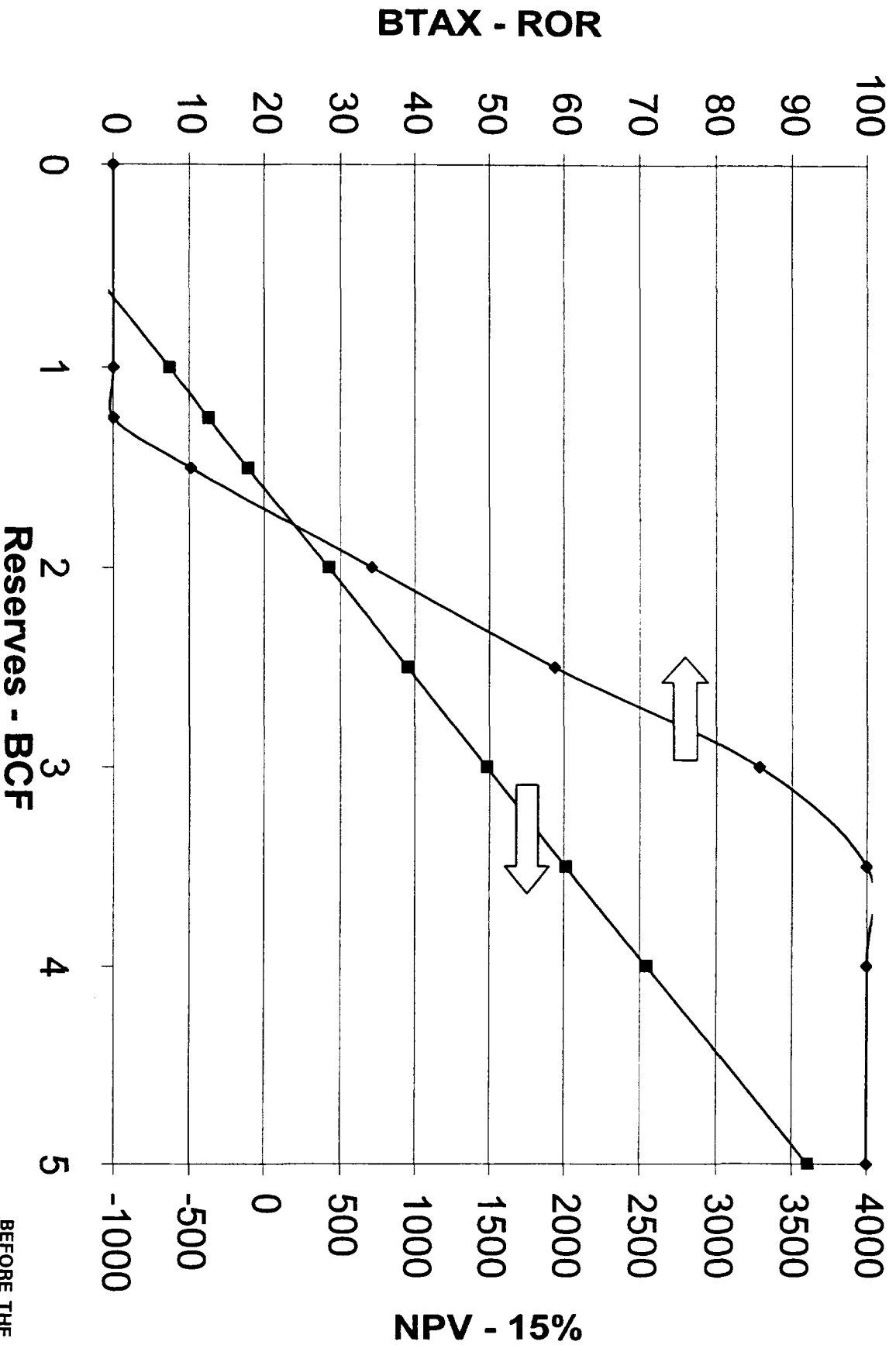
DATE : 04/12/99  
 TIME : 15:22:52  
 DBS FILE : Test  
 SETUP FILE : PLAN99FL  
 SEQ NUMBER : 0

PRESENT WORTH PROFILE AND  
 RATE-OF-RETURN VS. BONUS TABLE  
 PRIMARY DISCOUNT RATE : 15.00%

	BT	BT	BT	BT	BT	BT	BT
	NPV	NPV	NPV	NPV	NPV	NPV	BONUS
BTAX RATE OF RETURN (PCT)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
BTAX PAYOUT (YEARS)	1.25	1.28	1.33	1.37	1.41	1.45	1.49
BTAX NET INCOME/INVEST	4.29	3.60	3.00	2.50	2.10	1.75	1.45
BTAX NET INCOME/INV (DISC)	3.27	2.78	2.40	2.05	1.75	1.45	1.20
PROD START DATE	10/99	11.0	12.0	13.0	14.0	15.0	16.0
INITIAL WI (PCT)	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
INITIAL NRI (PCT)	77.0000	77.0000	77.0000	77.0000	77.0000	77.0000	77.0000
INITIAL GAS PRICE (\$/B)	13.28	13.28	13.28	13.28	13.28	13.28	13.28
INITIAL OIL PRICE (\$/M)	1.77	1.77	1.77	1.77	1.77	1.77	1.77
GROSS OIL WELLS	.0	1.0	2.0	3.0	4.0	5.0	6.0
CUMULATIVE OIL (MMBL)	.000	.000	.000	.000	.000	.000	.000
REMAINING OIL (MMBL)	152.496	4989.100	90.00	779.520	571.175	470.360	495.705
ULTIMATE OIL (MMBL)	152.496	4989.100	90.00	779.520	571.175	470.360	495.705

BEFORE THE  
 OIL CONSERVATION DIVISION  
 Case No. 12158 Exhibit No. 7  
 Submitted By:  
 Santa Fe Energy  
 Hearing Date: April 15, 1999

# Greenstone Fed Com #1 LX Drig Econ - Dev well



BTAX - ROR

Reserves - BCF

NPV - 15%



SANTA FE ENERGY RESOURCES, INC.

GENERALIZED WELL COST ESTIMATE

WELL NAME Greenstone Fed. Com. No. 1 Directional Well  
 LOCATION Surface: 480' FSL, 1650' FEL. TD: 1650' FSL Sec. 19, T20S, R34E, Lea Co., N.M.  
 DESCRIPTION Drill and Complete a 13,900' Morrow Gas Well

ACCOUNT	DESCRIPTION OF COSTS		DRY HOLE	PRODUCER
501- 000	<b>TANGIBLE WELL COSTS</b>			
501- 041	Conductor Csg	30" Conductor and 20" Surface @ 475'	20,125	20,125
501- 041	Surface Csg	13-3/8" 68.0 ppf S-80 ST&C @ 3300'	65,175	65,175
501- 041	Protection Csg	8-5/8" 32.0 ppf K-55 & S-80 ST&C @ 5,700'	57,855	57,855
501- 041	Intermediate Csg			
501- 041	Prod Csg	5-1/2" 17 ppf S95 LT&C @ 13900' TVD		116,000
501- 041	Prod Liner			
501- 042	Tubing	2-3/8" 4.7 ppf P-105 AB-Mod EUE @ 14300' MD		41,613
501- 043	Wellhead		5,000	13,000
501- 044	Pmpg Unit			
501- 045	Prime Mover			
501- 050	Other Dwn Hole Equip	Packer		6,500
501- 050	Rods			
501- 050	Subsurface Pmps			
501- 055	Csg Equip		4,000	6,000
501- 055	Electrical			
501- 055	Misc. Tangibles			
501- 055	Rod Equip			
501- 055	Tubing Equip			
	<b>TOTAL TANGIBLE COSTS</b>		<b>152,155</b>	<b>326,268</b>
541- 000	<b>LEASE FACILITY COSTS</b>			
541- 050	Flowlines			20,000
541- 050	Labor			20,000
541- 050	Other Prod Equip	GPU & Dehyd Unit		40,000
541- 050	Tank Facilities	2 Steel & 1 Fiberglass Tank w/ walkway		12,000
	<b>TOTAL LEASE FACILITY COSTS</b>		<b>-</b>	<b>92,000</b>
511- 000	<b>INTANGIBLE WELL COSTS</b>			
511- 021	Location	Dirt Work & Damages Payment	30,000	30,000
511- 022	Fencing		2,000	2,000
511- 026	Drilling Water		20,000	20,000
511- 031	Contractor Moving Exp		20,000	20,000
511- 032	Cont Footage or Turnkey			
511- 032	Contractor Daywork	70 DAYS @ \$6000/D	420,000	420,000
511- 033	Drig Fluid & Additives		60,000	60,000
511- 034	Bits & Reamers		70,000	70,000
511- 036	Coring & Core Analyses			
511- 037	Cement		42,000	51,000
511- 039	Inspection & Tstg of Tang		12,000	15,000
511- 041	Directional Drig Surveys	25 Days @ 6500/day	162,500	162,500
511- 042	Drilling Equip Rental		67,350	67,350
511- 043	Open Hole Logging		55,000	55,000
511- 044	Drill Stem Tstg			
511- 045	Mud Logging	\$500/d X 55 days	27,500	27,500
511- 051	Transportation		5,000	5,000
511- 052	Completion Unit	10 days X \$1500/day		15,000
511- 053	Completion Tool Rental			5,000
511- 054	Cased Hole Logs & Perfing			16,000
511- 055	Stimulation			30,000
511- 056	Rigsite Supervision	70 + 10 X \$500/day	35,000	40,000
511- 074	Drilling Overhead		15,000	20,000
511- 099	Fishing Tools & Exp			
511- 099	Testing: BHP, GOR, 4 Pt Pot			10,000
	Abandonment Cost		10,000	
	Other Intangibles	Rig Fuel at \$400/day X 70 days	28,000	28,000
0.1	Contingency (10%)		108,135	116,935
	<b>TOTAL INTANGIBLES</b>		<b>1,189,485</b>	<b>1,286,285</b>
	<b>TOTAL COSTS</b>		<b>1,341,640</b>	<b>1,704,553</b>

OPERATION DEPT APPROVAL (Initials)	SFER APPROVAL
APPROVAL DATE <i>MRBA/12/99</i>	APPROVAL DATE
ENGINEERING DEPT APPROVAL (Initials)	NON-OPERATOR APPROVAL
APPROVAL DATE <i>MSD 4/12/99</i>	APPROVAL DATE

BEFORE THE  
 OIL CONSERVATION DIVISION  
 Case No. 12158 Exhibit No. 9  
 Submitted By:  
 Santa Fe Energy  
 Hearing Date: April 15, 1999





SANTA FE ENERGY RESOURCES, INC.

GENERALIZED WELL COST ESTIMATE

WELL NAME Greenstone Fed. Corn. No. 1  
 LOCATION 1650' FSL, 1650' FEL Sec. 19, T20S, R34E, Lea Co., N.M.  
 DESCRIPTION Drill and Complete a 13,900' Morrow Gas Well

ACCOUNT	DESCRIPTION OF COSTS		DRY HOLE	PRODUCER
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501- 041	Intermediate Csg			
501- 041	Prod Csg	5-1/2" 17 ppf S95 LT&C @ 13900'		111,200
501- 041	Prod Liner			
501- 042	Tubing	2-3/8" 4.7 ppf P-105 AB-Mod EUE @ 13900'		40,449
501- 043	Wellhead		5,000	13,000
501- 044	Pmpg Unit			
501- 045	Prime Mover			
501- 050	Other Dwn Hole Equip	Packer		6,500
501- 050	Rods			
501- 050	Subsurface Pmps			
501- 055	Csg Equip		4,000	6,000
501- 055	Electrical			
501- 055	Misc. Tangibles			
501- 055	Rod Equip			
501- 055	Tubing Equip			
	TOTAL TANGIBLE COSTS		152,155	320,304
541- 000	LEASE FACILITY COSTS			
541- 050	Flowlines			20,000
541- 050	Labor			20,000
541- 050	Other Prod Equip	GPU & Dehyd Unit		40,000
541- 050	Tank Facilities	2 Steel & 1 Fiberglass Tank w/ walkway		12,000
	TOTAL LEASE FACILITY COSTS		-	92,000
511- 000	INTANGIBLE WELL COSTS			
511- 021	Location	Dirt Work & Damages Payment	30,000	30,000
511- 022	Fencing		2,000	2,000
511- 026	Drilling Water		20,000	20,000
511- 031	Contractor Moving Exp		20,000	20,000
511- 032	Cont Footage or Turnkey			
511- 032	Contractor Daywork	45 DAYS @ \$6000/D	270,000	270,000
511- 033	Drig Fluid & Additives		40,000	40,000
511- 034	Bits & Reamers		60,000	60,000
511- 036	Coring & Core Analyses			
511- 037	Cement		42,000	51,000
511- 039	Inspection & Tstg of Tang		12,000	15,000
511- 041	Directional Drig Surveys			
511- 042	Drilling Equip Rental		57,600	57,600
511- 043	Open Hole Logging		55,000	55,000
511- 044	Drill Stem Tstg			
511- 045	Mud Logging	\$500/d X 30 days	15,000	15,000
511- 051	Transportation		5,000	5,000
511- 052	Completion Unit	10 days X \$1500/day		15,000
511- 053	Completion Tool Rental			5,000
511- 054	Cased Hole Logs & Perfing			16,000
511- 055	Stimulation			30,000
511- 056	Rigsite Supervision	45 + 10 X \$500/day	22,500	27,500
511- 074	Drilling Overhead		10,000	15,000
511- 099	Fishing Tools & Exp			
511- 099	Testing: BHP, GOR, 4 Pt Pot			10,000
	Abandonment Cost		10,000	
	Other Intangibles	Rig Fuel at \$400/day X 45 days	18,000	18,000
0.1	Contingency (10%)		68,910	77,710
	TOTAL INTANGIBLES		758,010	854,810
	TOTAL COSTS		910,165	1,267,114

OPERATION DEPT APPROVAL (Initials)	SFER APPROVAL
APPROVAL DATE <i>MJB 4/12/99</i>	APPROVAL DATE
ENGINEERING DEPT APPROVAL (Initials)	NON-OPERATOR APPROVAL
APPROVAL DATE <i>ZUSA 4/12/99</i>	APPROVAL DATE

BEFORE THE  
 OIL CONSERVATION DIVISION  
 Case No. 12158 Exhibit No. 10  
 Submitted By:  
 Santa Fe Energy  
 Hearing Date: April 15, 1999

## Greenstone Fed Com #1 LX Offset Well Info

Well	Sinagua 18 1	Sinagua 18 2	Topaz 30 1	Topaz 19 1	Straight Hole	Deviated
Spud Date	01-12-94	10-15-94	04-10-96	11-21-97		
Kickoff point		9750		9870		
Day at 10,000	23	28	28	13	26	26
Days from 10,000 to TD	16	32	22	33	19	33
Days to TD	39	60	50	46	45	59
TD - measured depth	13750	13925	14000	14140	13900	14000
Lateral Displacement		1134 feet		1378 feet		1170 feet

BEFORE THE  
OIL CONSERVATION DIVISION  
Case No. 12158 Exhibit No. 11  
Submitted By:  
*Santa Fe Energy*  
Hearing Date: April 15, 1999

Well Name : **Topaz 30 #1**  
 Field : **Lynch**  
 Formation : **Morrow**  
 Location : **Lea Co., N.M.**

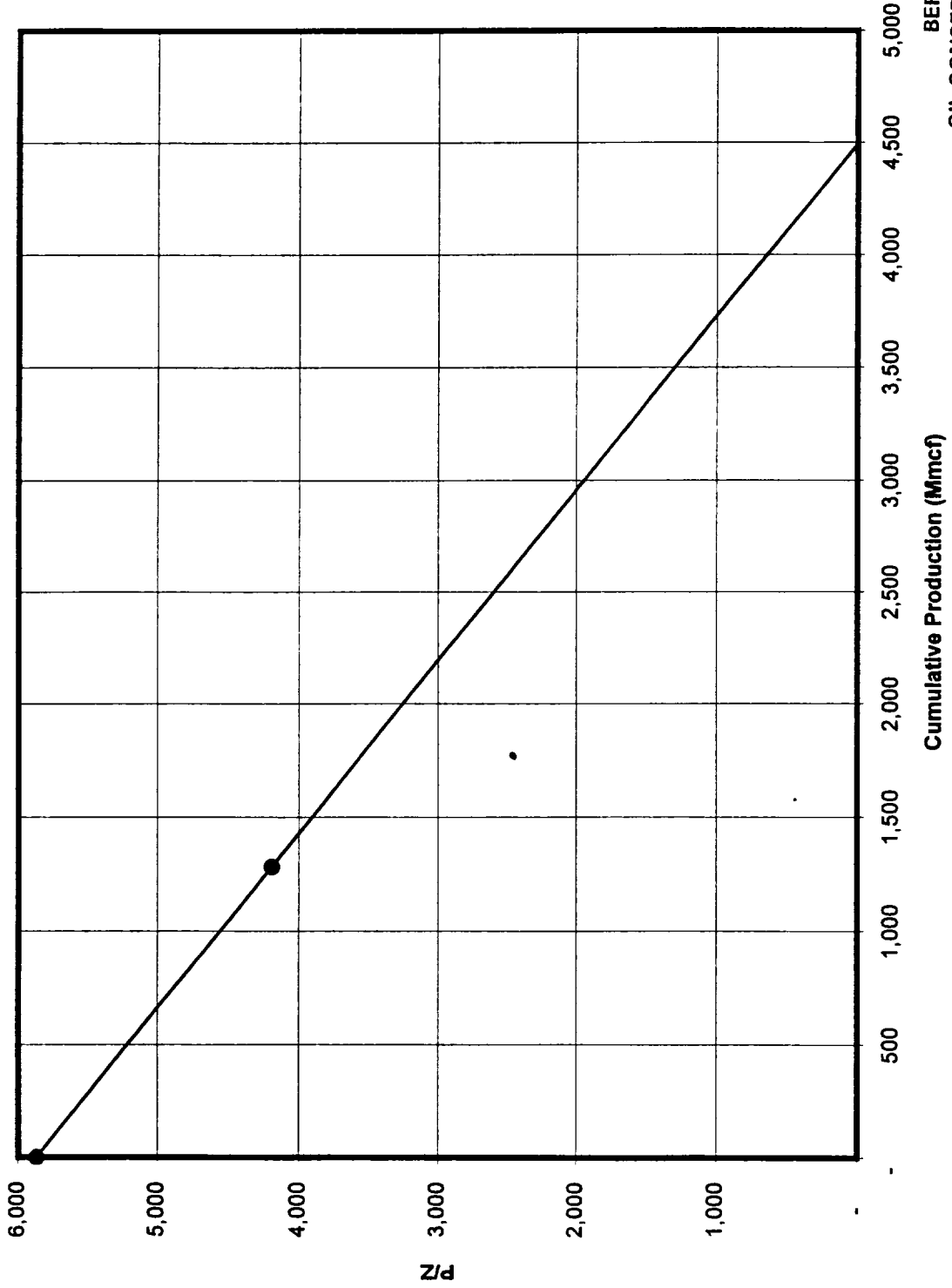
Gas Gravity :	0.664	
Misc Gas ? (yes=1) :	1	
Reservoir Temp :	192	°F
Surface Temp :	60	°F
Depth of Zone :	13,829	feet
Tubing Diameter :	1.995	inches

% N2	0.43	%
% CO2	0.68	%
% H2S	0.00	%

Date	Cumulative Prod (Mmcf)	SITP (psi)		Measured SIBHP (psi)	Calculated SIBHP (psi)	Z Factor	BHP/Z
		Measured	Calculated				
6/28/96	-		4,949	6,590	n/a	1.1236	5,865
6/6/98	1,283		2,675	3,843	n/a	0.9170	4,191
			n/a		n/a	-	-
			n/a		n/a	-	-
			n/a		n/a	-	-
			n/a		n/a	-	-
			n/a		n/a	-	-
			n/a		n/a	-	-
			n/a		n/a	-	-
			n/a		n/a	-	-
			n/a		n/a	-	-
			n/a		n/a	-	-

BEFORE THE  
 OIL CONSERVATION DIVISION  
 Case No. 12158 Exhibit No. **12**  
 Submitted By:  
 Santa Fe Energy  
 Hearing Date: April 15, 1999

Topaz 30 #1



BEFORE THE  
OIL CONSERVATION DIVISION  
Case No. 12158 Exhibit No. 13  
Submitted By:  
*Santa Fe Energy*  
Hearing Date: April 15, 1999

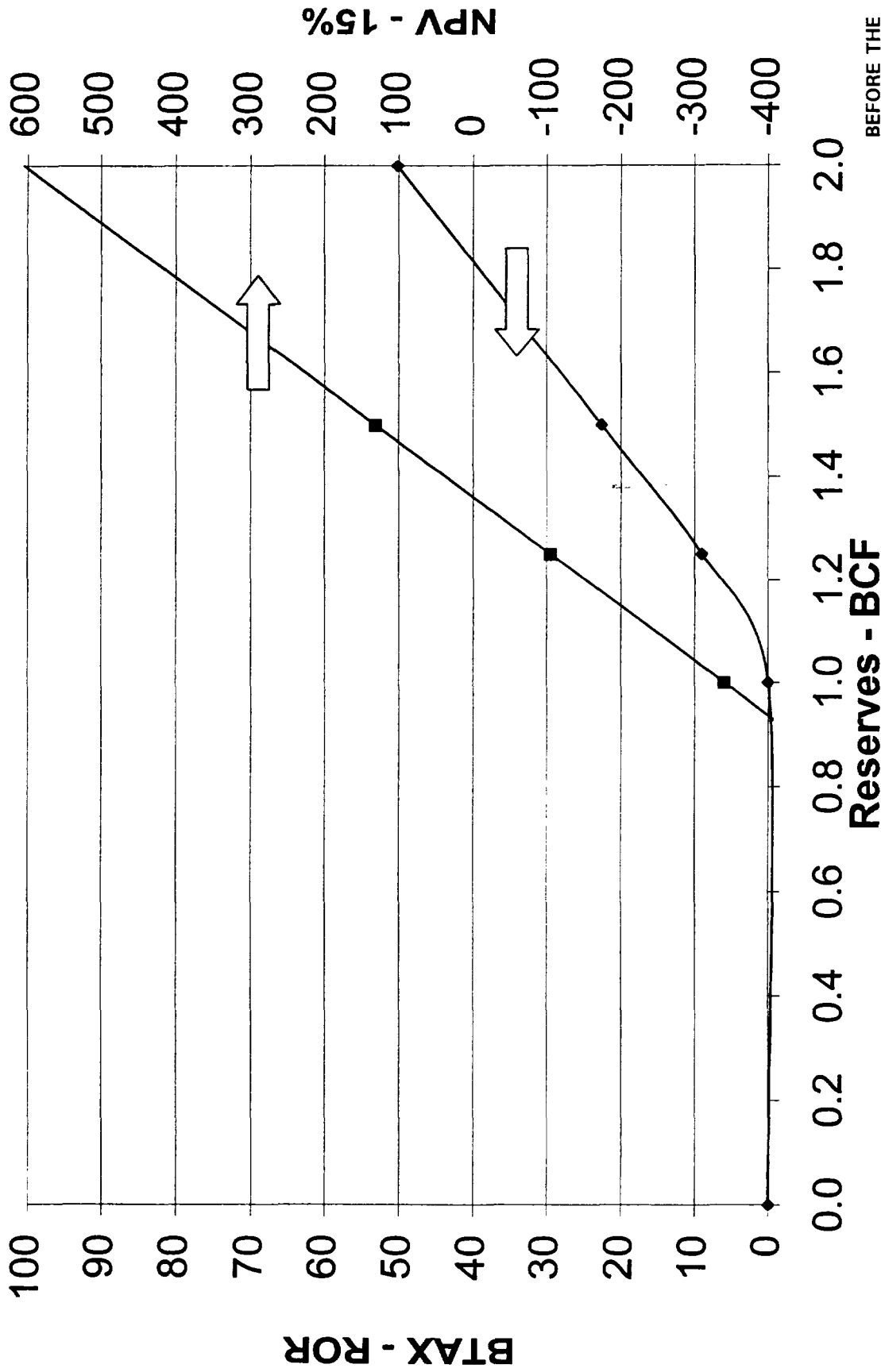
Well Name: Topaz 30 Federal Com #1  
 Location: Sec. 30, T20S, R34E  
 St, County: Lea, New Mexico

Bottomhole Temp (°F)	192
Gas Gravity (air = 1.0)	0.664
CO2 (%)	0.683
H2S (%)	0
N2 (%)	0.425

Pressure Gradient (psi/ft)	0.47666
Drainage area (acres)	300
Recovery Factor	0.80

Depth	Net Pay Ft	$\phi_{nd}$	Form Psi	Sw	Z	GIP (MMcf)	EUR (MMcf)
13826	14	9.0%	6,590	23.3%	1.124	4,443	3554

# Greenstone Fed Com #1 LX Drlg Econ - Straight well



BEFORE THE  
OIL CONSERVATION DIVISION  
Case No. 12158 Exhibit No. **15**  
Submitted By:  
**Santa Fe Energy**  
Hearing Date: April 15, 1999

# Dwights

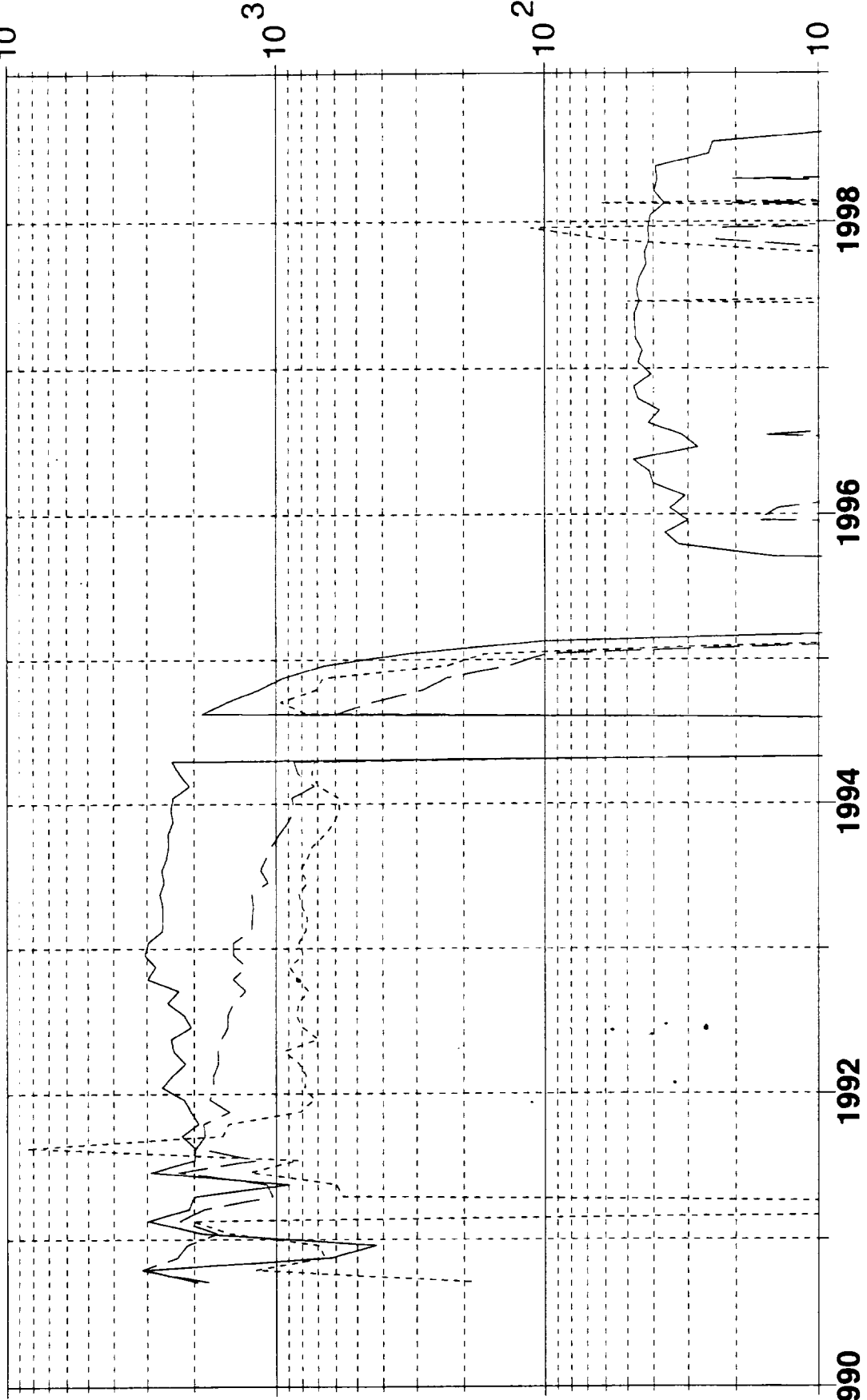
Lease: HAMON A FED COM (1)

04/13/99

Retrieval Code: 250,025,20S34E07J00PM  
4

$10^3$   
 $10^3$

$10^4$



Oil (bb/day)

Water (bb/day)

County: LEA, NM

Field: QUAIL RIDGE (MORROW OIL Cum: 201.1 mbbl)

Reservoir: MORROW

Gas Cum: 3305 mmcf

Operator: MARATHON OIL CO Location: 7J 20S 34E

Gas (mcf/day)

BEFORE THE  
OIL CONSERVATION DIVISION

Case No. 12158 Exhibit No. 16

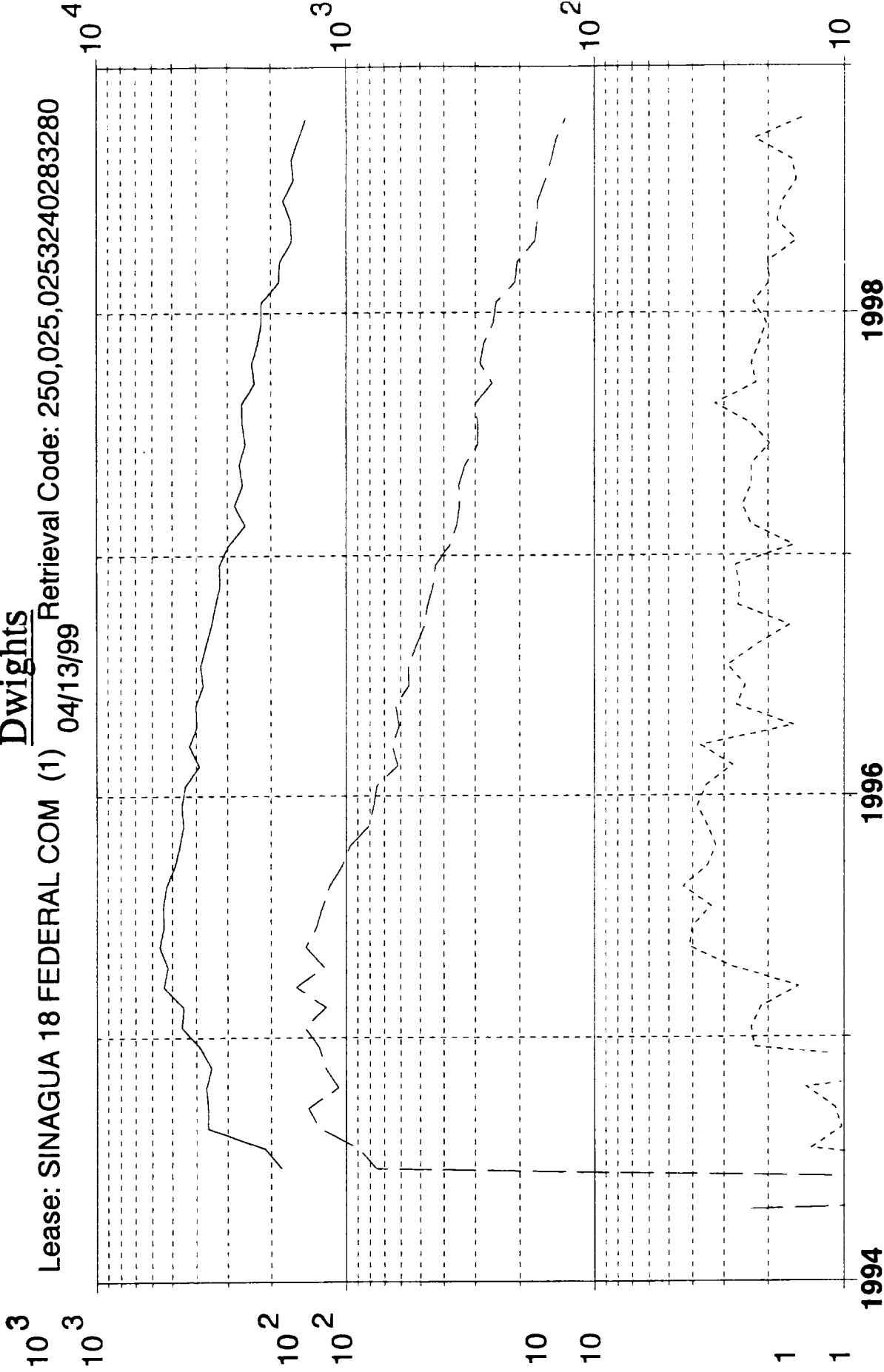
Submitted By:

Santa Fe Energy

Hearing Date: April 15, 1999

# Dwights

Lease: SINAGUA 18 FEDERAL COM (1) 04/13/99 Retrieval Code: 250,025,0253240283280



Oil (bbl/day)  
Water (bbl/day)

County: LEA, NM

F.P. Date: 04/94

Gas (mcf/day)

Field: QUAIL RIDGE (MORROW Oil Cum: 104.2 mbbl)

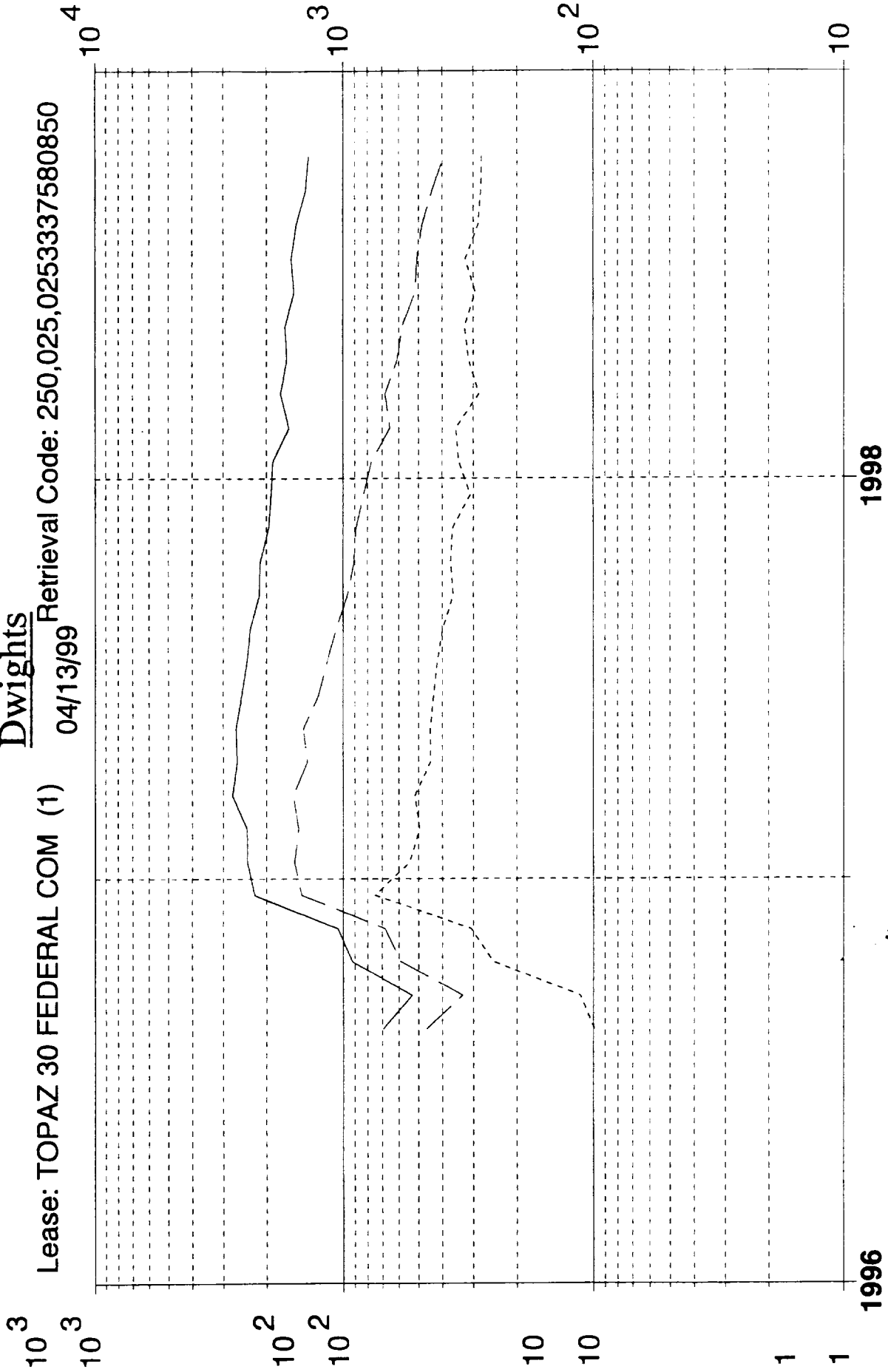
Reservoir: MORROW Gas Cum: 5289 mmcf

Operator: SANTA FE ENERGY Location: 18 20S 34E

BEFORE THE  
OIL CONSERVATION DIVISION  
Case No. 12158 Exhibit No. 17  
Submitted By:  
Santa Fe Energy  
Hearing Date: April 15, 1999



**Dwights**  
 Lease: TOPAZ 30 FEDERAL COM (1)      Retrieval Code: 250,025,0253337580850  
 04/13/99



Oil (bbl/day)	County: LEA, NM	F.P. Date: 08/96	Gas (mcf/day)
Water (bbl/day)	Field: LYNCH WEST (MORRO)	Oil Cum: 71.47 mbbl	
	Reservoir: MORROW	Gas Cum: 1502 mmcf	
	Operator: SANTA FE ENERGY	Location: 30 20S 34E	

BEFORE THE  
 OIL CONSERVATION DIVISION  
 Case No. 12158 Exhibit No. **18**  
 Submitted By:  
 Santa Fe Energy  
 Hearing Date: April 15, 1999

