

BEFORE THE
 OIL CONSERVATION DIVISION
 Case No. 11019 Exhibit No. 3
 Submitted By:
MITCHELL ENERGY CORPORATION
 Hearing Date: July 21, 1994

MITCHELL ENERGY CORPORATION
 400 W. ILLINOIS, STE. 1000 MIDLAND, TEXAS 79701

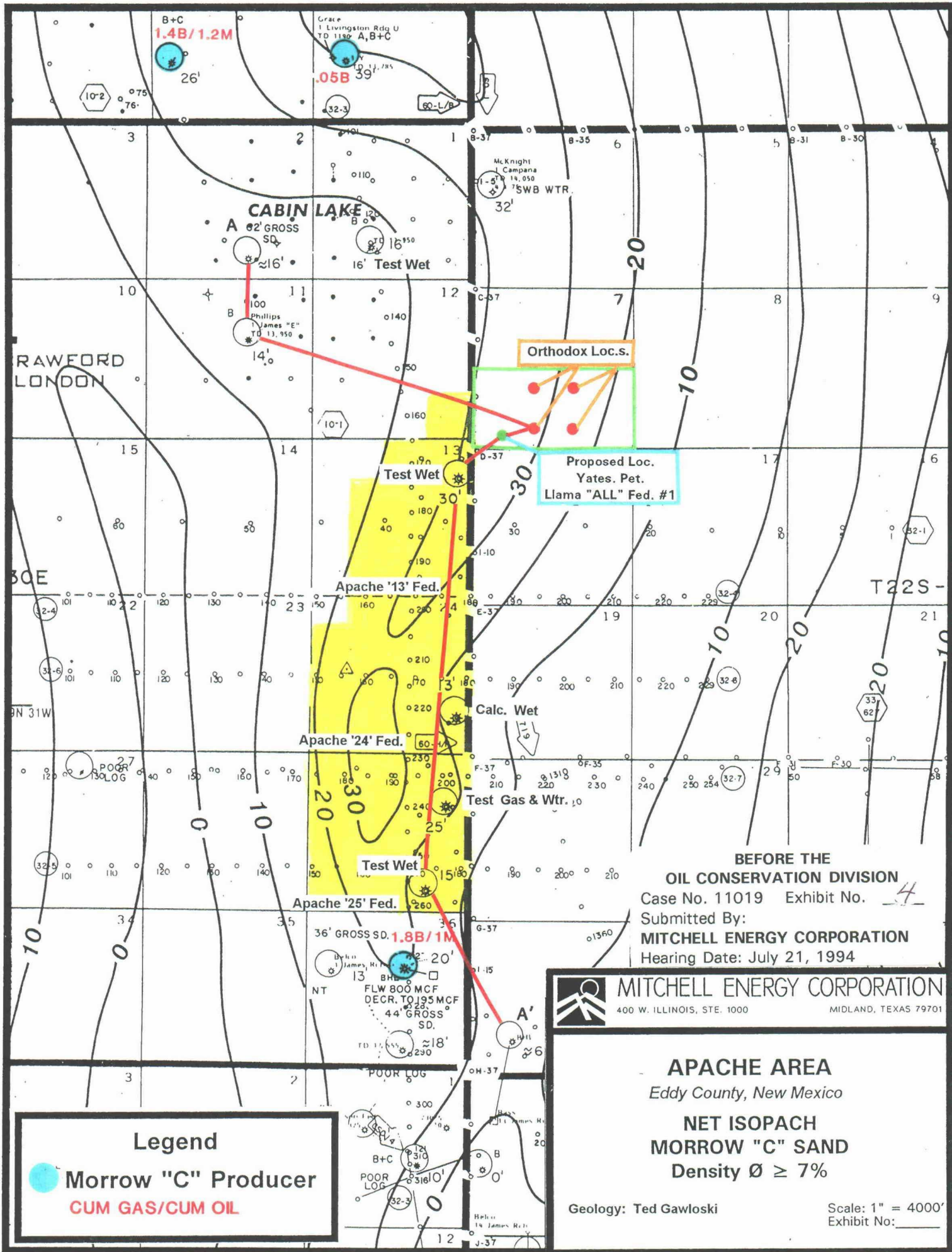
APACHE AREA
 Eddy County, New Mexico

STRUCTURE: T/ STRAWN

Geology: Ted Gawloski

Scale: 1" = 4000'
 Exhibit No. _____

Legend
 **Strawn Producer**
CUM GAS/CUM OIL



Legend

 Morrow "C" Producer
 CUM GAS/CUM OIL

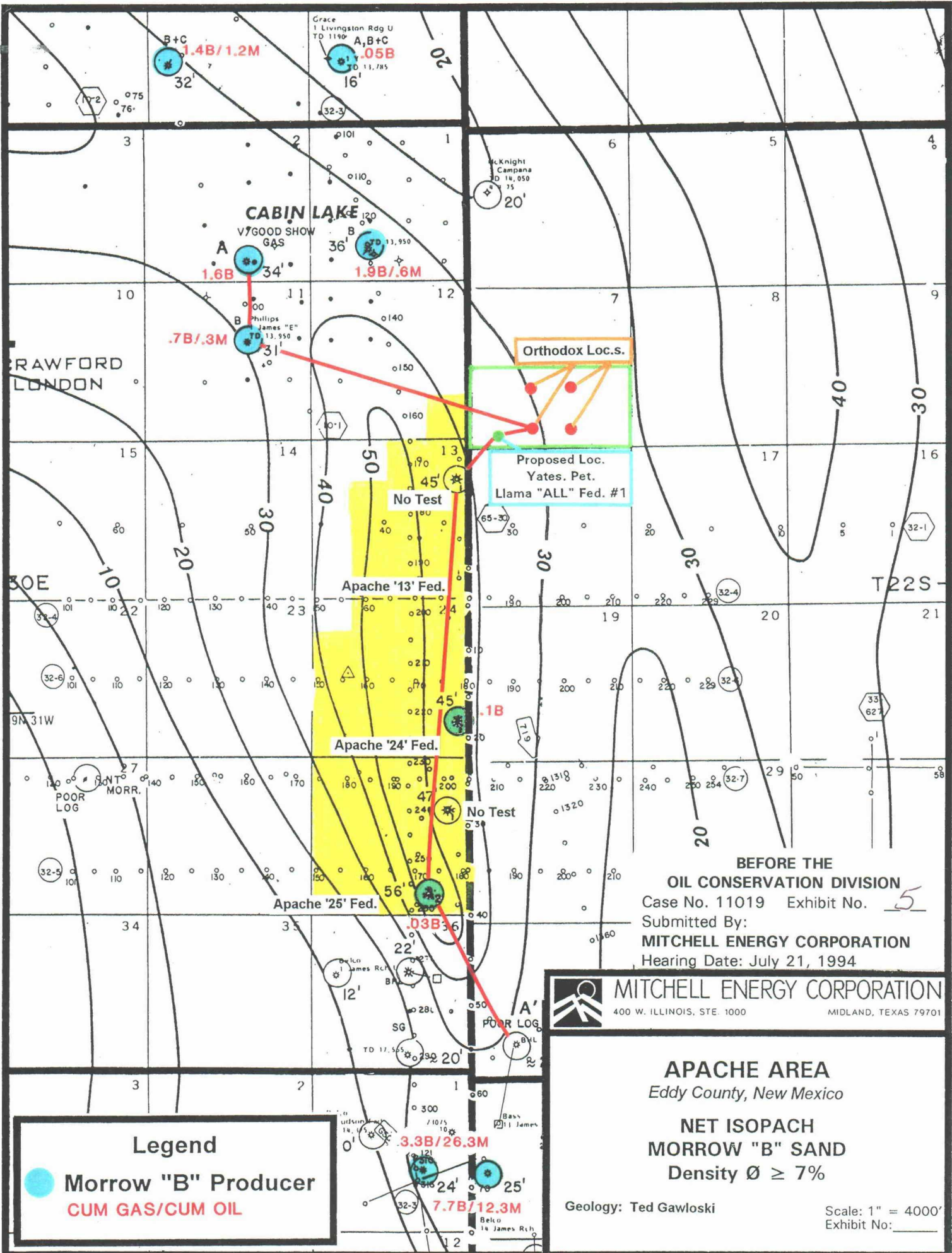
BEFORE THE
OIL CONSERVATION DIVISION
 Case No. 11019 Exhibit No. 4
 Submitted By:
MITCHELL ENERGY CORPORATION
 Hearing Date: July 21, 1994

 **MITCHELL ENERGY CORPORATION**
 400 W. ILLINOIS, STE. 1000 MIDLAND, TEXAS 79701

APACHE AREA
 Eddy County, New Mexico
NET ISOPACH
MORROW "C" SAND
 Density $\rho \geq 7\%$

Geology: Ted Gawloski

Scale: 1" = 4000'
 Exhibit No: _____



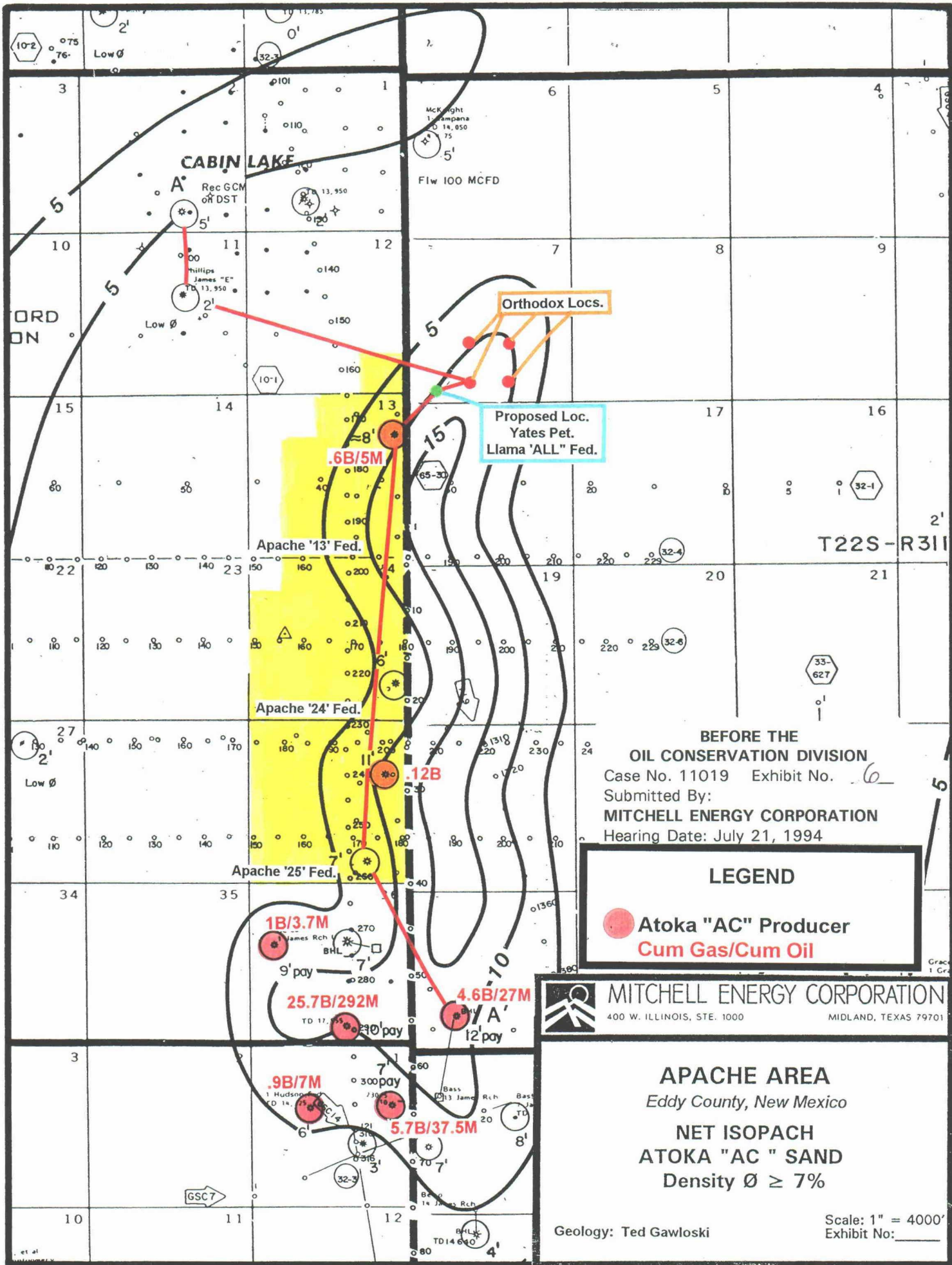
B+C 1.4B/1.2M
 A, B+C 1.05B
 1.6B 34'
 1.9B/.6M
 1.7B/.3M
 Orthodox Loc.s.
 Proposed Loc. Yates. Pet. Llama "ALL" Fed. #1
 No Test
 Apache '13' Fed.
 Apache '24' Fed.
 Apache '25' Fed.
 No Test
 1.03B/.36
 3.3B/26.3M
 7.7B/12.3M

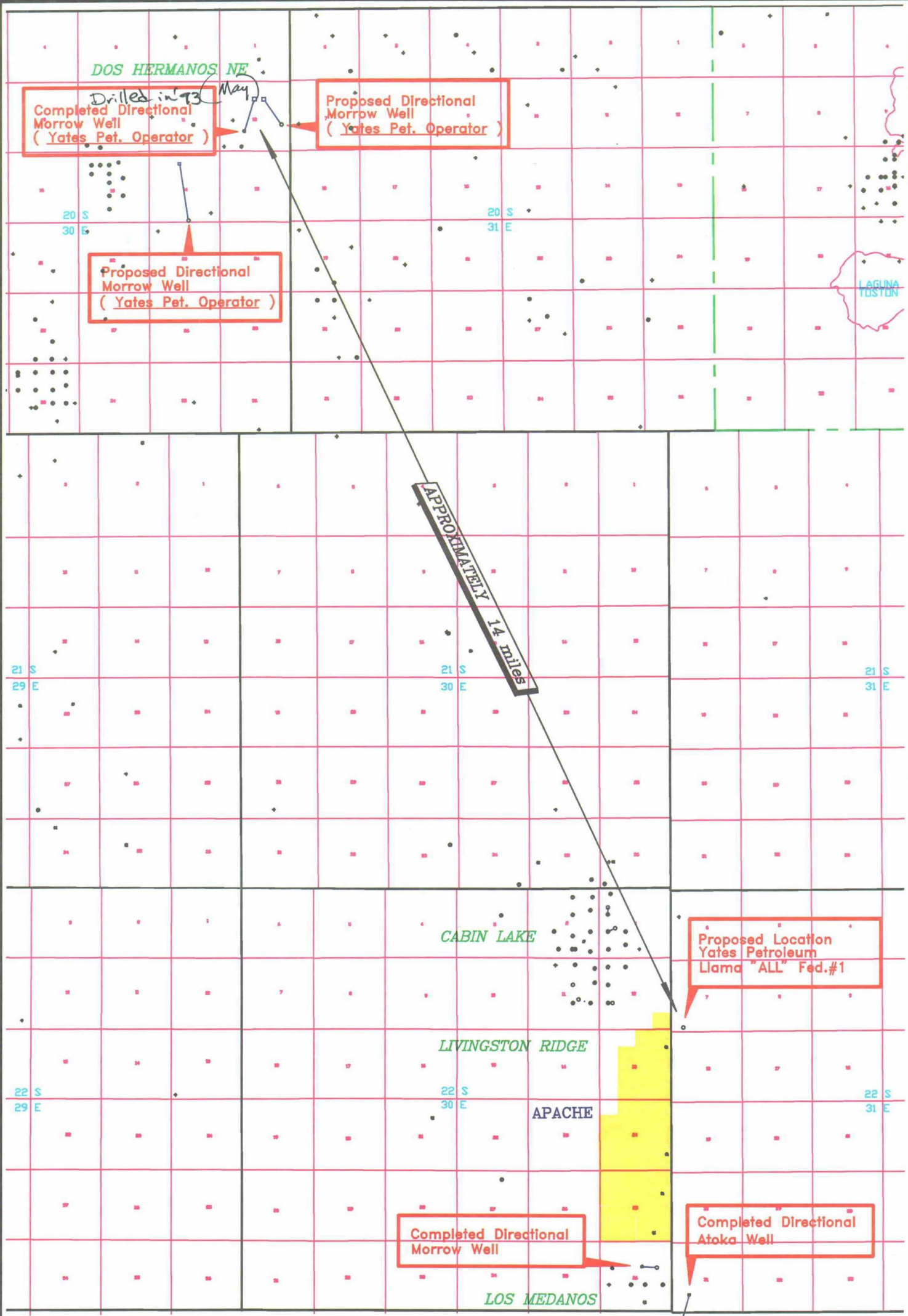
BEFORE THE
 OIL CONSERVATION DIVISION
 Case No. 11019 Exhibit No. 5
 Submitted By:
 MITCHELL ENERGY CORPORATION
 Hearing Date: July 21, 1994

MITCHELL ENERGY CORPORATION
 400 W. ILLINOIS, STE. 1000 MIDLAND, TEXAS 79701

APACHE AREA
 Eddy County, New Mexico
NET ISOPACH
MORROW "B" SAND
 Density $\varnothing \geq 7\%$
 Geology: Ted Gawloski
 Scale: 1" = 4000'
 Exhibit No: _____

Legend
 Morrow "B" Producer
 CUM GAS/CUM OIL





DOS HERMANOS NE

Completed Directional Morrow Well (Yates Pet. Operator)

Proposed Directional Morrow Well (Yates Pet. Operator)

Proposed Directional Morrow Well (Yates Pet. Operator)

APPROXIMATELY 1 1/4 miles

CABIN LAKE

Proposed Location Yates Petroleum Llama "ALL" Fed.#1

LIVINGSTON RIDGE

APACHE

Completed Directional Morrow Well

Completed Directional Atoka Well

LOS MEDANOS

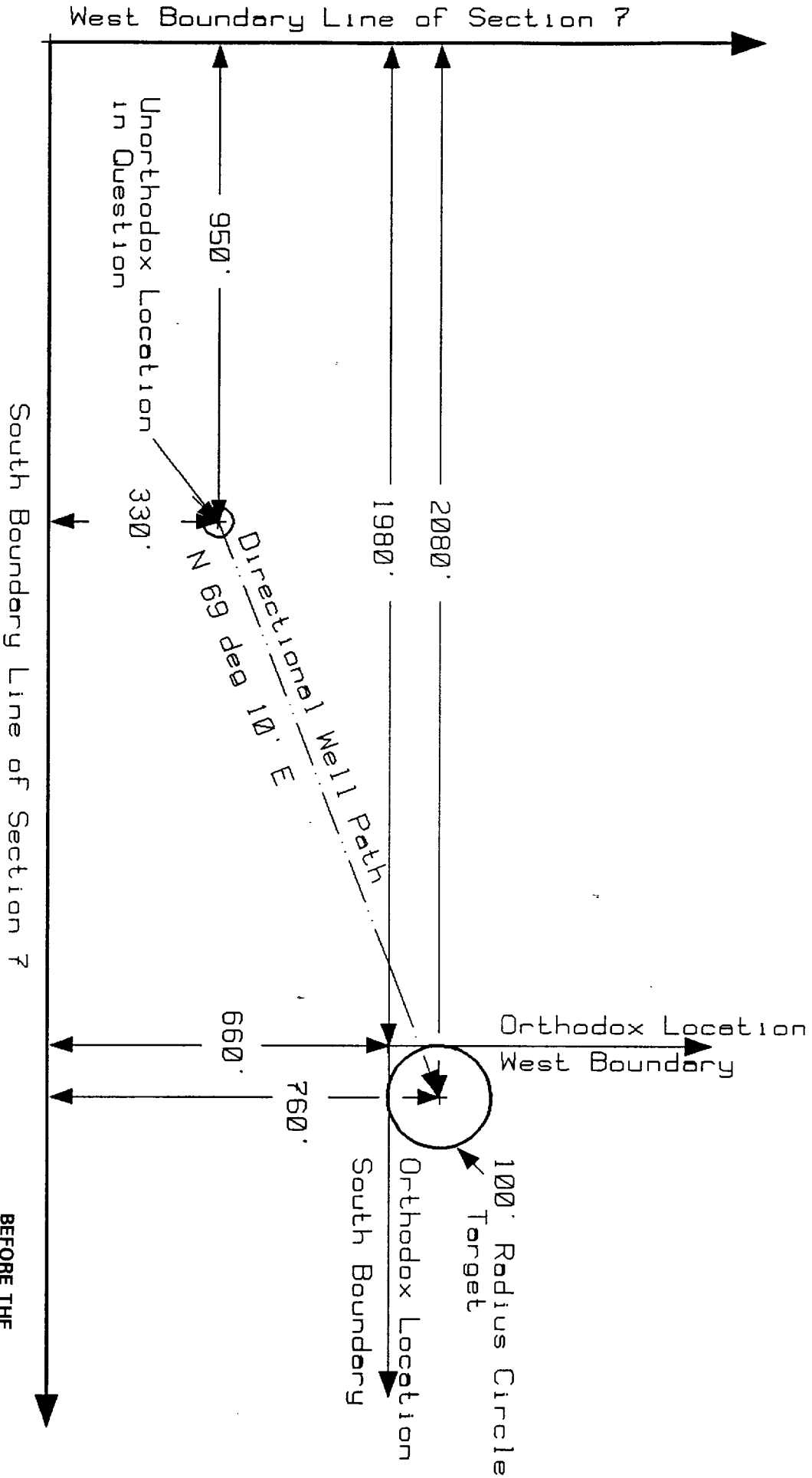
MITCHELL ENERGY CORPORATION
 400 W. ILLINOIS, STE. 1000
 MIDLAND, TEXAS 79701

BEFORE THE
 OIL CONSERVATION DIVISION
 Case No. 11019 Exhibit No. 7
 Submitted By:
MITCHELL ENERGY CORPORATION
 Hearing Date: July 21, 1994

APACHE AREA
 Eddy County, New Mexico
 Completed or Proposed
 Directional Drilled
 Morrow Wells

Prepared By: Ted Gawloski

Section 7, T22S, R31E



South Boundary Line of Section 7

West Boundary Line of Section 7

Unorthodox Location in Question

N 69 deg 10' E
Well Path

Orthodox Location

100' Radius Circle
Target

Orthodox Location
South Boundary

660'
760'

950'

2080'

1980'

BEFORE THE

OIL CONSERVATION DIVISION

Case No. 11019 Exhibit No. 8

Submitted By:

MITCHELL ENERGY CORPORATION

Hearing Date: July 21, 1994



WILSON DOWNHOLE SERVICES

Division Of Wilson Industries, Inc.

P.O. BOX 1492 HOUSTON, TEXAS 77251 713-237-3975

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11019 Exhibit No. 9
Submitted By:
MITCHELL ENERGY CORPORATION
Hearing Date: July 21, 1994

July 13, 1994

Mr. Bill Thoroughman
Mitchell Energy
2001 Timberloch Place
The Woodlands, TX 77380

Reference: Apache Area Prospect
Eddy County, New Mexico

Dear Mr. Thoroughman:

Thank you for allowing Wilson Downhole Services the opportunity to submit a plan and cost estimates for your well in Eddy County, New Mexico. Please find enclosed the following:

1. Cost Estimates for Directional Services
2. 8 1/2" X 11" Proposals

We at Wilson Downhole Services estimate it will take 38 to 40 days to directional drill from 10525' to 14550' TVD. We will furnish the following services and equipment as follows:

EQUIPMENT	UNIT PRICE	PRICE
Directional drilling operator	\$ 575.00/Day	\$ 23,000.00
Operator's expenses	\$ 60.00/Day	\$ 2,400.00
Operator's mileage	\$ 1.00/Mile	\$ 800.00
Computer & drafting charges (1 original and 6 copies of completions)	\$ 378.00/Well	\$ 378.00
Single shot instrument complete Type "A"	\$ 110.00/Day	\$ 4,400.00
(1) Non mag drill collars	\$ 45.00/Day/ea	\$ 1,800.00
(1) 8 1/2" Full pac stabilizers	\$ 735.25/Well/ea	\$ 735.25
(2) 8 1/2" Nearbit stabilizers	\$ 289.00/Well/ea	\$ 578.00

EQUIPMENT	UNIT PRICE	PRICE
(1) 8 1/4 Nearbit stabilizers	\$ 289.00/Well/ea	\$ 289.00
(4) 8 1/2" String stabilizers	\$ 289.00/Well/ea	\$ 1,156.00
(1) Crossover subs	\$ 9.00/Day/ea	\$ 90.00
Float valve	\$ 354.00/Sale	\$ 354.00
(1) Lift subs	\$ 8.00/Day	\$ 80.00
6 1/4" x 10' Steel pony drill collar	\$ 336.30/Well	\$ 336.30
4 1/2" Reg. baffle plate	\$ 36.00/Sale	\$ 36.00
(3) 6 1/8" Near bit stabilizers	\$1,225.00/Well/ea	\$ 3,765.00
(4) 6 1/8" String stabilizers	\$1,225.00/Well/ea	\$ 5,020.00
(1) Crossover subs	\$ 7.00/Day/ea	\$ 210.00
Muleshoe sub	\$ 161.50/Min.	\$ 161.50
Float sub	\$ 10.00/Day	\$ 300.00
Float valve	\$ 312.00/Sale	\$ 312.00
Bent subs 1°, 1 1/4°, 1 1/2°, 1 3/4°, 2°, 2 1/2° (charged as one)	\$ 145.35/Min.	\$ 145.35
(1) Lift sub	\$ 8.00/Day	\$ 240.00
4 3/4" x 10' Steel pony drill collar	\$ 295.45/Well	\$ 295.45
3 1/2" Reg. baffle plate	\$ 36.00/Sale	\$ 36.00
Inspection, repairs and transportation		\$ 3,500.00
Downhole motor charges for initial kick-off		\$ 15,400.00
MWD/Steering Charges		\$ 12,000.00
Gyro survey from 0' to 10,525'		\$ 3,600.00
SUB TOTAL		\$ 81,417.85
For AFE purposes, please add this additional cost for downhole motors, steering tool and wireline for correction runs if necessary.		\$ 20,000.00

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DIRECTIONAL AND HORIZONTAL DRILLING OILWELL SURVEYING

Mitchell Energy
July 13, 1994
Page 3

EQUIPMENT	UNIT PRICE	PRICE
<u>Note:</u> There will be no charges for tools that are not used.		
TOTAL		\$101,417.85

If further information is needed, please contact us at (713) 237-3975.

Sincerely,

Wilson Downhole Directional Drilling

Frank Stolpman
Vice President-Sales

FS/jak

c:/1994/mitch.mex



DIRECTIONAL AND HORIZONTAL DRILLING OILWELL SURVEYING

MITCHELL ENERGY
 APACHE AREA PROSPECT WELL NO. 1
 EDDY COUNTY, NEW MEXICO
 PROPOSAL FILE = MEECNMA

Position of well relative to reference point, Latitude = 330.00 feet Departure = 950.00 feet

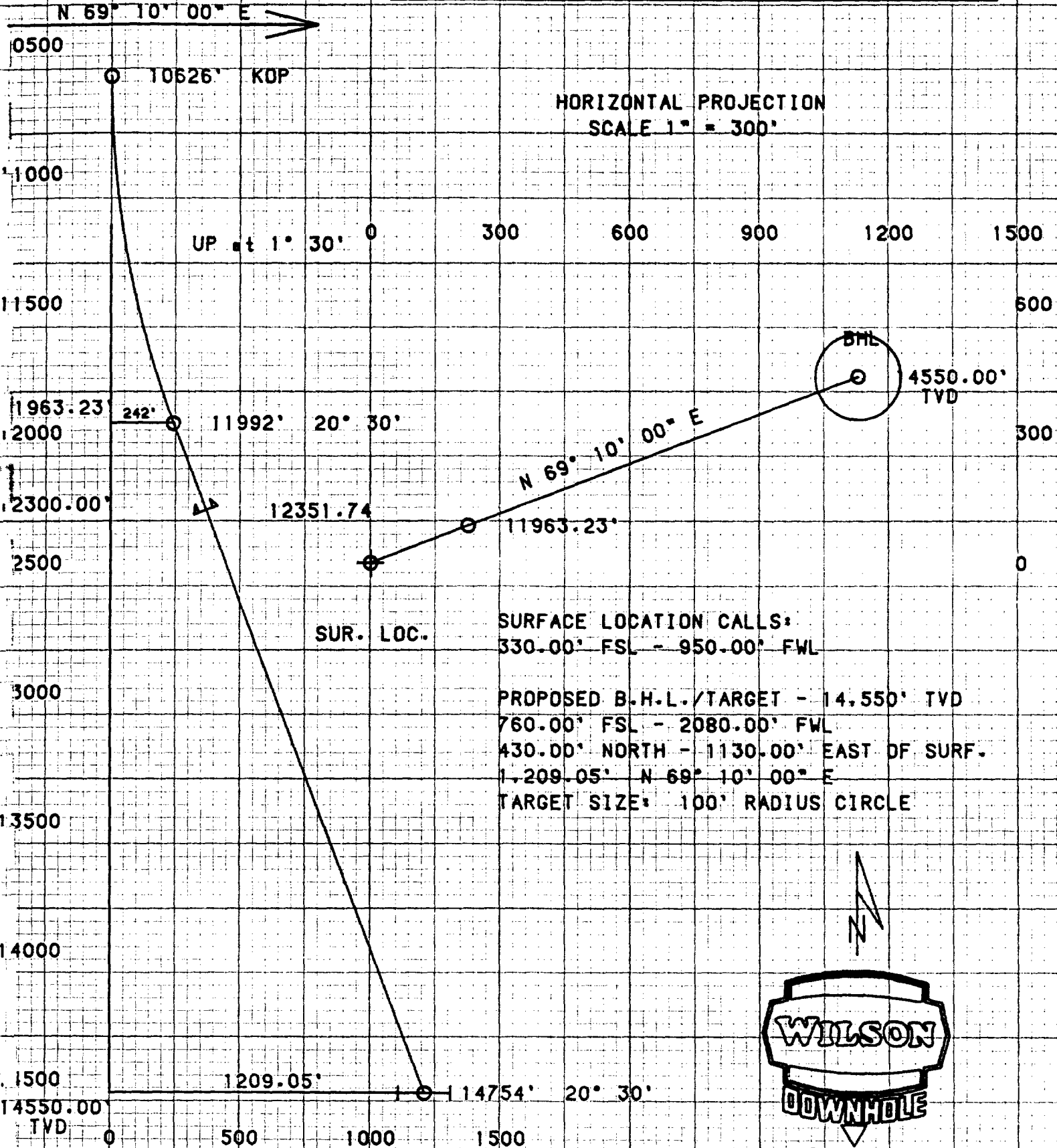
MD	TVD	Inclin.	Survey Dir.	N/S	E/W	Vert Sect	Closure	N/S	E/W	DLS	T.F.
		Deg Mn Sc	Deg Mn Sc	from Surface	pos	Dist	Dist	from Reference	pos		Dir.
* 10625.53	10625.53	0 0 0	69 10 0	.00	.00	.00	.00	330.00	950.00	1.50	0 *
10700.00	10700.00	1 7 1	69 10 0	.26	.68	.73	.73	330.26	950.68	1.50	0
10800.00	10799.94	2 37 1	69 10 0	1.42	3.72	3.98	3.98	331.42	953.72	1.50	0
10900.00	10899.76	4 7 1	69 10 0	3.51	9.21	9.86	9.86	333.51	959.21	1.50	0
11000.00	10999.40	5 37 1	69 10 0	6.52	17.14	18.34	18.34	336.52	967.14	1.50	0
11100.00	11098.78	7 7 1	69 10 0	10.47	27.51	29.43	29.43	340.47	977.51	1.50	0
11200.00	11197.84	8 37 1	69 10 0	15.33	40.30	43.12	43.12	345.33	990.30	1.50	0
11300.00	11296.50	10 7 1	69 10 0	21.12	55.51	59.39	59.39	351.12	1005.51	1.50	0
11400.00	11394.70	11 37 1	69 10 0	27.83	73.13	78.24	78.24	357.83	1023.13	1.50	0
11500.00	11492.38	13 7 1	69 10 0	35.44	93.15	99.66	99.66	365.44	1043.15	1.50	0
11600.00	11589.46	14 37 1	69 10 0	43.97	115.54	123.63	123.63	373.97	1065.54	1.50	0
11700.00	11685.89	16 7 1	69 10 0	53.39	140.31	150.13	150.13	383.39	1090.31	1.50	0
11800.00	11781.58	17 37 1	69 10 0	63.71	167.43	179.14	179.14	393.71	1117.43	1.50	0
11900.00	11876.48	19 7 1	69 10 0	74.92	196.88	210.65	210.65	404.92	1146.88	1.50	0
* 11992.20	11963.23	20 30 0	69 10 0	86.03	226.08	241.89	241.89	416.03	1176.08	.00	0 *
* 14753.86	14550.00	20 30 0	69 10 0	430.00	1130.00	1209.05	1209.05	760.00	2080.00	.00	0 *



MITCHELL ENERGY
APACHE AREA PROSPECT WELL NO. 1
EDDY COUNTY, NEW MEXICO

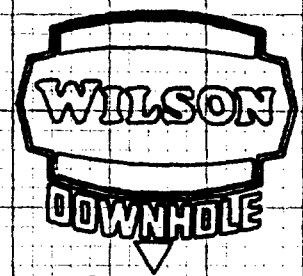
VERTICAL PROJECTION
 SCALE 1" = 500'

HORIZONTAL PROJECTION
 SCALE 1" = 300'



SURFACE LOCATION CALLS:
 330.00' FSL - 950.00' FWL

PROPOSED B.H.L./TARGET - 14,550' TVD
 760.00' FSL - 2080.00' FWL
 430.00' NORTH - 1130.00' EAST OF SURF.
 1,209.05' N 69° 10' 00" E



13-Jul-94

MITCHELL ENERGY & DEVELOPMENT CORP. - ENERGY DIVISION

AUTHORITY FOR EXPENDITURE (AFE) COST ESTIMATE

BEFORE THE Oil Project (check 1 only)
OIL CONSERVATION DIVISION
 Case No. 11019 Exhibit No. 10] Injection [] Water Supply
 Submitted By: MITCHELL ENERGY CORPORATION] Disposal [X] Depth 14,550'
 Hearing Date: July 21, 1994

Form B-1 [] Add [] Change [] Delete
 AFE Number _____
 Property/Well Name Apache Area Prospect
 Project Description Drill (Straight Hole)
 Net Working Interest -----
 Group Code _____
 Location Code _____
 Department Number _____
 County Eddy St. NM
 Operator MEC

Estimated Date Project Will Be Completed _____ (Mo./Yr.)

<u>DRILLING COSTS</u>	<u>Amount</u>
INTANGIBLE	
10 Dry Hole Abandonment.....	_____
11 Rig Mobilization and Demobilization.....	_____
12 Power and Fuel.....	_____
13 Water.....	40,000
14 Solids Control Equipment Rental...40 days @ \$325...	13,000
*15 Directional Equipment and Services.....	_____
16 Fishing Tools and Services.....	_____
17 Subsurface Casing Equipment.....	8,000
18 Contract Labor and Service.....	35,000
19 Supervision - Company and/or Contract..60 @ \$500...	30,000
50 Road and Site Preparation.....	38,000
51 Footage Contract Fee....12,300' @ \$19.50/ft.....	240,000
52 Daywork Contract Fee....30 days @ \$5500/day.....	165,000
53 Mud and Chemicals.....	90,000
54 Bits and Reamers.....	60,000
55 Drilling Tools and Equipment Rental.....	50,000
56 Cement and Cement Services.....	60,000
*57 Open Hole Logging-Testing..3 log runs, 45 ML days..	90,000
*58 Drill Stem Testing.....	_____
59 Coring and Analysis.....	_____
60 Transportation.....	22,000
61 Air/Marine Transportation.....	_____
63 Overhead.....	25,000
64 Insurance.....	_____
65 Company Labor and Services.....	_____
*66 Prospect Generation.....	20,000
67 Miscellaneous Services and Contingency.....	75,000
TOTAL INTANGIBLE COSTS *****	1,061,000
TANGIBLE	
21 Casing-Drive Pipe & Conductor _____ 40' - 20".....	2,000
40 Casing-Surface <u>550'-13/3/8"</u>	11,000
41 Casing-Intermediate <u>3,800'-9-5/8" 12,300'-7"</u>	189,000
42 Casinghead Equipment (Including Valves).....	8,000
43 Casing Spool (Including Valves).....	18,000
44 Miscellaneous Equipment.....	2,000
TOTAL TANGIBLE COSTS *****	230,000
TOTAL DRILLING (DRY HOLE) COSTS *****	1,291,000

*Invalid for disposal and water supply wells.

MEDC 252-02
 Rev. 4/29/85

$$\begin{array}{r}
 1,580 \\
 1,291 \\
 \hline
 2,871
 \end{array}$$

Prepared by: WCT/wct
 Date Prepared: 7/14/94

MITCHELL ENERGY & DEVELOPMENT CORP. - ENERGY DIVISION

AUTHORITY FOR EXPENDITURE (AFE) COST ESTIMATE

 BEFORE THE Project (check 1 only)
OIL CONSERVATION DIVISION
 Case No. 11019 Exhibit No. 11 Injection [] Water Supply
 Submitted By: MITCHELL ENERGY CORPORATION Disposal [X] Depth 14,550'TVD
 Hearing Date: July 21, 1994 14,754' MD

 Form B-1 [] Add [] Change [] Delete
 AFE Number _____
 Property/Well Name Apache Area Prospect
 Project Description Drill (Directional)
 Net Working Interest -----
 Group Code _____
 Location Code _____
 Department Number _____
 County Eddy St. NM
 Operator MEC

Estimated Date Project Will Be Complete _____ (Mo./Yr.)

DRILLING COSTS	10525'=KOP; Build @ 1.5 deg./100';	Amount
INTANGIBLE	Hold 20.5 deg; 1209' reach	
10	Dry Hole Abandonment.....	
11	Rig Mobilization and Demobilization.....	<u>40,000</u>
12	Power and Fuel.....	
13	Water.....	<u>45,000</u>
14	Solids Control Equipment Rental...50 days @ \$325...	<u>16,000</u>
*15	Directional Equipment and Services.....	<u>102,000</u>
16	Fishing Tools and Services.....	
17	Subsurface Casing Equipment.....	<u>8,000</u>
18	Contract Labor and Service.....	<u>35,000</u>
19	Supervision - Company and/or Contract..70 @ \$500...	<u>35,000</u>
50	Road and Site Preparation.....	<u>38,000</u>
51	Footage Contract Fee.....	
52	Daywork Contract Fee....70 days @ \$5500/day.....	<u>385,000</u>
53	Mud and Chemicals.....	<u>110,000</u>
54	Bits and Reamers.....	<u>150,000</u>
55	Drilling Tools and Equipment Rental.....	<u>60,000</u>
56	Cement and Cement Services.....	<u>60,000</u>
*57	Open Hole Logging-Testing..3 log runs, 45 ML days..	<u>100,000</u>
*58	Drill Stem Testing.....	
59	Coring and Analysis.....	
60	Transportation.....	<u>22,000</u>
61	Air/Marine Transportation.....	
63	Overhead.....	<u>25,000</u>
64	Insurance.....	
65	Company Labor and Services.....	
*66	Prospect Generation.....	<u>20,000</u>
67	Miscellaneous Services and Contingency.....	<u>88,000</u>
TOTAL INTANGIBLE COSTS *****		<u>1,339,000</u>

TANGIBLE		
21	Casing-Drive Pipe & Conductor _____ 40' - 20".....	<u>2,000</u>
40	Casing-Surface <u>550'-13/3/8"</u>	<u>11,000</u>
41	Casing-Intermediate <u>3,800'-9-5/8" 12,300'-7"</u>	<u>200,000</u>
42	Casinghead Equipment (Including Valves).....	<u>8,000</u>
43	Casing Spool (Including Valves).....	<u>18,000</u>
44	Miscellaneous Equipment.....	<u>2,000</u>
TOTAL TANGIBLE COSTS *****		<u>241,000</u>

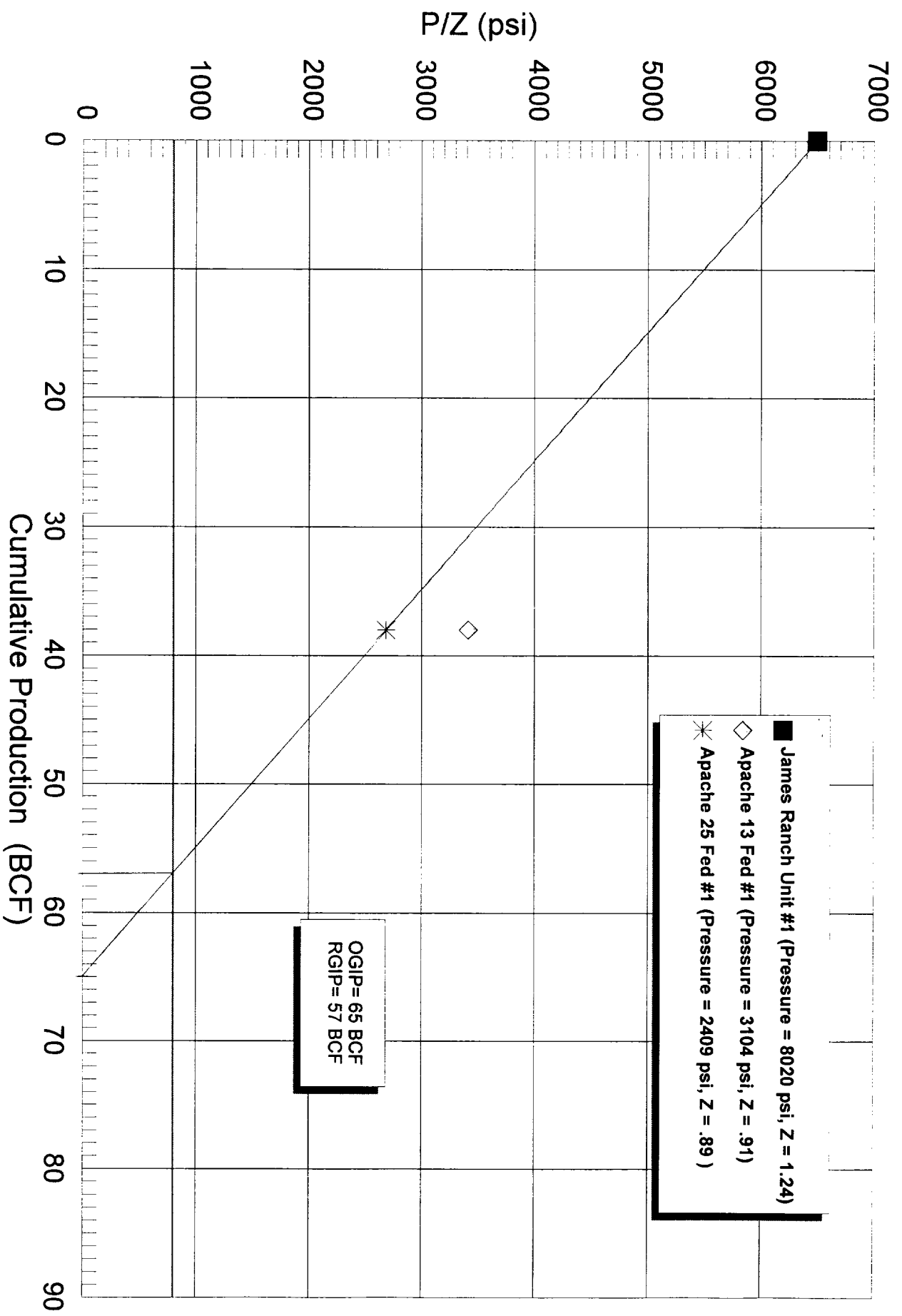
TOTAL DRILLING (DRY HOLE) COSTS *** 1,580,000**

*Invalid for disposal and water supply wells.

MEDC 252-02
 Rev. 4/29/85

Prepared by: WCT/wct
 Date Prepared: 7/14/94

Atoka "AC" Sand P/Z vs Cumulative



VOLUMETRIC RESERVE ESTIMATE

Atoka "AC" Sand Isopach

Apache Area

Eddy County, New Mexico

Contour Interval	5 ft	10 ft	15 ft
Area (acres)	4040	2028	542

Estimated Reservoir Volume = 41,400 AcreFt

Original Gas In Place (8020 psi) = 1722 MCF/AcreFt

Estimated Original Gas In Place = 71,249,000 MCF

Estimated Recoverable Gas In Place (85% RE) = 60,560,000 MCF
- Cumulative Production (as of 12/93) = 38,178,000 MCF

Estimated Remaining Recoverable = 22,382,000 MCF

Sample Calculation:

$$Vb1 = 5 (4040) = 20,200 \text{ AcreFt}$$

$$Vb2 = 5/2 (4040+2028) = 15,170 \text{ AcreFt}$$

$$Vb3 = 5/3 [2028+542+ \text{sqrt}(2028 \times 542)] = 6030 \text{ AcreFt}$$

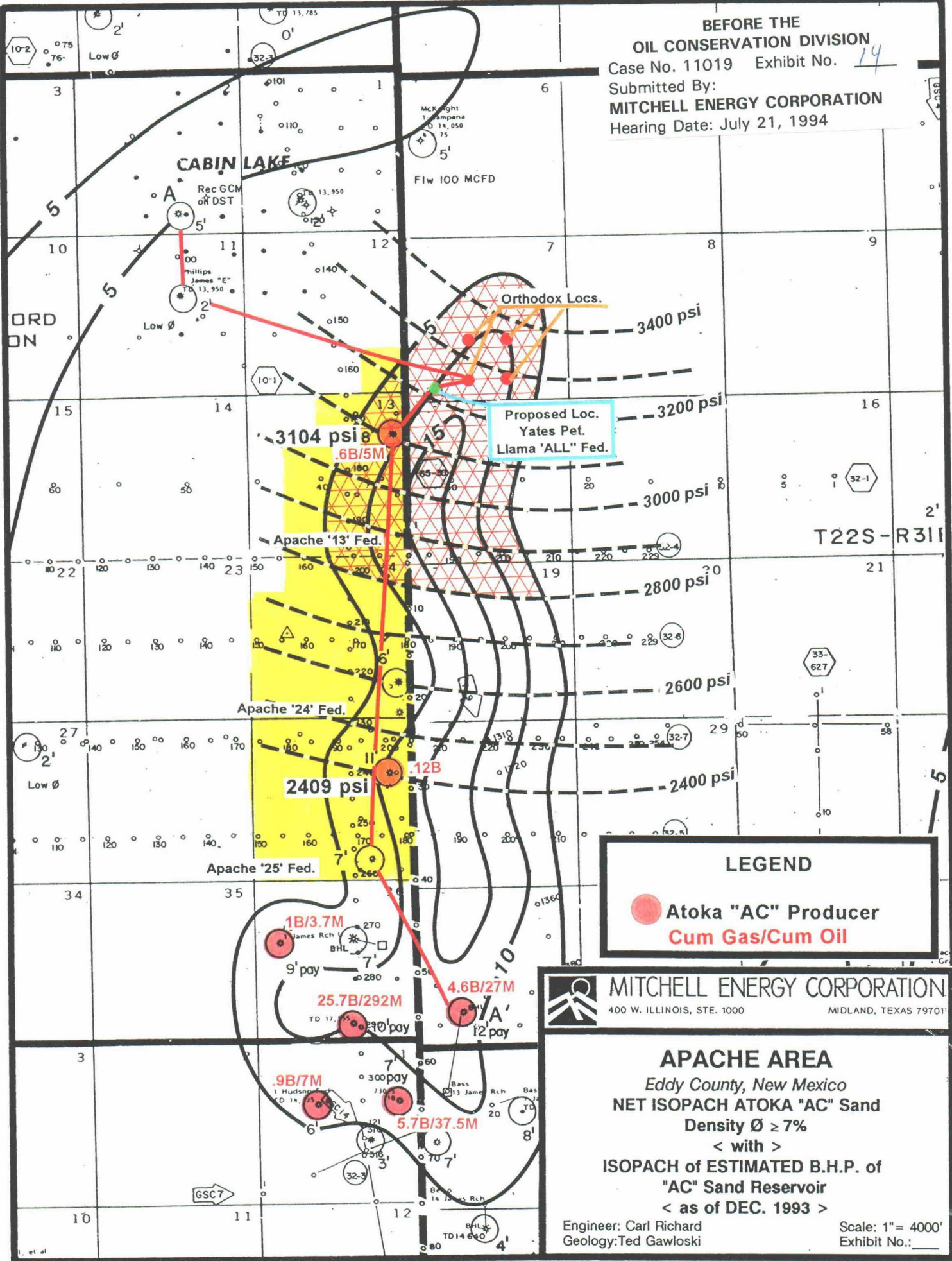
$$\text{Estimated Reservoir Volume} = Vb1+Vb2+Vb3 = 41,400 \text{ AcreFt}$$

$$\text{Estimated Original Recoverable Reserve} = 41,400 \text{ AcreFt} \times 1722 \text{ MCF/AcreFt} = 71,249,000 \text{ MCF}$$

CDR 07/19/94

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11019 Exhibit No. 13
Submitted By:
MITCHELL ENERGY CORPORATION
Hearing Date: July 21, 1994

BEFORE THE
 OIL CONSERVATION DIVISION
 Case No. 11019 Exhibit No. 14
 Submitted By:
MITCHELL ENERGY CORPORATION
 Hearing Date: July 21, 1994



LEGEND

● Atoka "AC" Producer
 Cum Gas/Cum Oil

MITCHELL ENERGY CORPORATION
 400 W. ILLINOIS, STE. 1000
 MIDLAND, TEXAS 79701

APACHE AREA
 Eddy County, New Mexico
NET ISOPACH ATOKA "AC" Sand
 Density $\geq 7\%$
 < with >
 ISOPACH of ESTIMATED B.H.P. of
 "AC" Sand Reservoir
 < as of DEC. 1993 >

Engineer: Carl Richard
 Geology: Ted Gawloski

Scale: 1" = 4000'
 Exhibit No.: _____