

# Presidio Oil Company

3131 Turtle Creek Blvd. • Suite 400 • Dallas, Texas 75219-5415 • (214) 528-5898 • Facsimile (214) 528-2160

## SUBSIDIARIES

Peake Operating Company  
Presidio Energy, Inc.  
Presidio Exploration, Inc.  
The Desana Corporation  
The Petroleum Corp. of Delaware

### SUPERIOR FEDERAL WELL NO. 6 PRODUCTION ALLOCATION EAST BURTON FLAT ATOKA GAS

Prior to adding the perforations in May of 1987, the well was flow tested. The 33 days before the workover the Morrow perms from 11,177'-11,314' tested an average of 482 MCFGPD. On May 7, 1987 three sets of perforations were added from 11,118'-11,122'; 11,006'-11,011' + 10,951'-10,956'. The perforated interval from 10,951'-10,956' is designated by the State as an Atoka interval. A copy of the Compensated Neutron-Formation Density log with perforated intervals is attached. The following is a tabular presentation of log interpretation in each perforated interval.

no

Perforated Interval	Net Feet of Pay (ft)	Average Porosity (%)	Net Cacl. Porosity-Feet	% Gas from Pay
10,951'-56'	6	6.2	0.372	41.15
11,006'-11'	8	3.5	0.280	30.97
11,118'-22'	6	4.2	0.252	<u>27.88</u>

100.00

The total gross increase in production from the workover on May 7, 1987 was 62 MCFGPD. Using a weighted average of net porosity feet of pay to determine the percentage of the increased gas volume that came from the Atoka pay shows that 41.15% of the 62 MCFGPD increase came from the 10,951'-56' Atoka interval. This is a total volume of 25.5 MCFGPD from Atoka pay. The total volume from both Atoka and Morrow pay after the workover was an average of 544 MCFGPD. Therefore, the percentage of Atoka gas from the total stream of combined production is  $25.5/544 = .0469$  or approximately 4.7% of total daily production. The allocation of Atoka gas production is based on these calculations. The allocations of produced reserves is 4.7% of total production after the May, 1987 workover and future production will be allocated in the same manner. Total produced Atoka reserves is 19,677 MCFG + 65 BO through July of 1989; 4.7% of all future tubing side production will be allocated to the East Burton Flat Atoka Gas Pool.

↑ 62 MCF/D

ILLEGIBLE

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Use "APPLICATION FOR PASSPORT" for same purpose.

NAME OF ORIGINATOR

3303 Lee Parkway, Dallas, Texas 75215

A LOCATION OF THE ABOVE PERSONS SHOULD BE FURNISHED WITH ANY INFORMATION ON ANY OTHER PERSONS KNOWN TO THEM.

Van Lierde, T., 1980 FSL & 1980 FSL, Section 6  
T205-R296, Baby Colony, New Mexico

14. YOUNG, JOE

11-11-68

**2000**

10.

Check Appropriate Box To Indicate Nature of Notice, Type of Case, Date

Director of Education for

TABLE 1. *WATER SUBJECTS*

## FRAC TURE TEST

### REPORT ON ACTIONS

REPAIR  
(Other)

PTIA ON ALIENS, CHINESE

**MULTIPLE COMMENTS**

**ABANDON®**

### CHARGE PLANNING

www.pearsoned.com.cn

## FACTS ON TREATMENT

[illegible][illegible][illegible]

On January 29, 1971 moved in and drilled 17-1/2 inch hole to 20 feet. Ran out of 13-3/8", 48#/ft., H-40 casing and connected w/Robby Air Casing. No casing 1/29/71.

RECEIVED

ADD 117

ARTERIA, 135 mm

RECEIVED

APR 18 1964

U.S. GOVERNMENT PRINTING OFFICE

**THE NEW YORK PUBLIC LIBRARY**

100-44388-100

## Northwestern Business

## References

1990

APPROVED BY \_\_\_\_\_  
 CONTINUING OF APPROVAL IF ANY

## APPENDIX

\_\_\_\_\_

DECLASSIFIED FOR RECORD PURPOSES  
DATE 10/10/01 BY 60322 UCBAW/STP

THE UNIVERSITY OF CHICAGO

ILLEGIBLE

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

OC 117

Form C-122  
Revised 1-6-66  
Effective 1-6-66

All distances must be from the outer boundaries of the Section

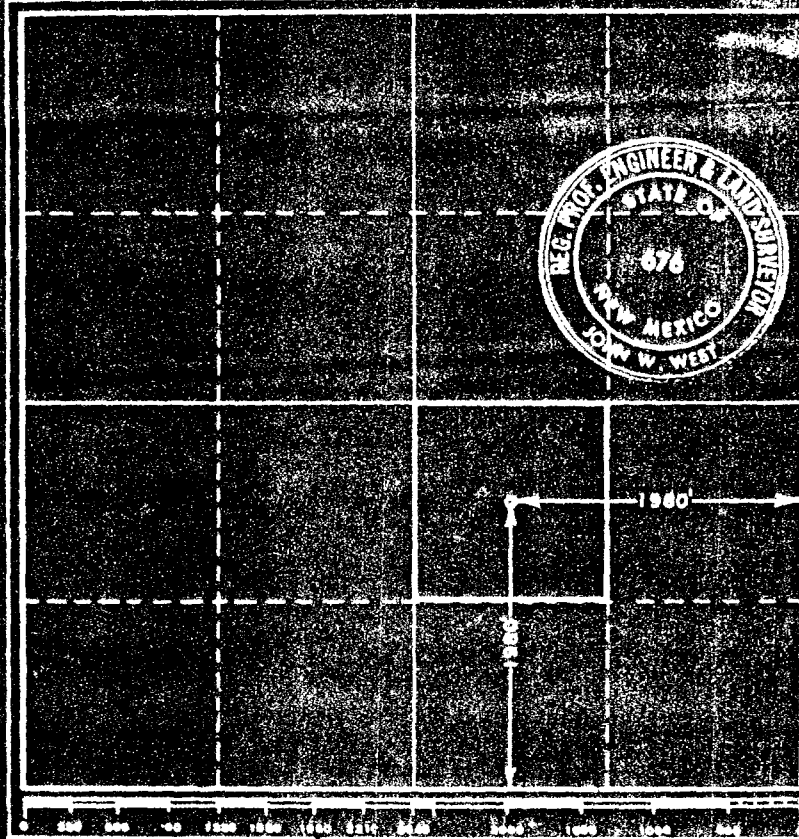
Operator <b>THE PETROLEUM CORP.</b>		Lease <b>SUPERIOR FEDERAL</b>		Well No. <b>1</b>
Unit Letter <b>J</b>	Section <b>6</b>	Township <b>20 SOUTH</b>	Range <b>29 EAST</b>	County <b>DEY</b>
Actual Footage Location of Well: 1980 feet from the <b>SOUTH</b> line and 1980 feet from the <b>EAST</b> line				
Ground Level Elev.	Producing Formation <b>YATES</b>	Pool <b>WILDCAT</b>	Dedicated Acreage <b>40</b>	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to owning interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



<b>CERTIFICATION</b>	
I hereby certify that the information furnished on this plat is true and correct to the best of my knowledge and belief.	
Name <i>John W. West</i>	Position Registered Professional Engineer
Company The Petroleum Corp.	
Date January 27, 1971	
I hereby certify that the well location shown on this plat was located from true north or actual magnetic north by an accurate surveying instrument, and that the land is free and clear of all other claims, mortgages and liens.	
Date Surveyed January 27, 1971	Registered Professional Engineer John W. West
Certificate No. <b>676</b>	

ILLEGIBLE

© COPYRIGHTED 1971  
REPRODUCTION PROHIBITED

EDDY COUNTY NEW MEXICO WILDCAT

Well: THE PETROLEUM CORP. 1 Separator - Federal

Locn: E/part county, 16 mi SW/Loco Hills; 1980' F58BL's spec 6-285-298; 1 1/2 mi NW/Russell  
(Yates) F14; 3 mi E-SE/1450' failure.

Spud: 1-30-71; Comp: 3-18-71; Elev: 3283' brd TLD 1352'

Casing: 10 1/2" 101'

Comp info: No cores or tests; Run logs; C/C-E. Reach Dr'g. Co.

LOG: NR

API No: 30-015-20374

Petroleum Information  
CORPORATION  
A Division of J.C. McPherson Company

Date: 4-21-71 Card No.: 167m

LLEGIBLE



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. TYPE OF WORK: DRILL ☒ DEEPEN ☐ PLUG BACK ☐

2. TYPE OF WELL: OIL ☒ GAS ☐ OTHER ☐ SINGLE ☒ MULTIPLE ☐ ZONE ☐ BOSS ☐

3. NAME OF OPERATOR: The Petroleum Corporation

4. ADDRESS OF OPERATOR: 3303 Lee Parkway, Dallas, Texas 75219

5. LOCATION OF WELL (Report location clearly and in accordance with any State requirements):  
At surface: Unit Letter "J", 1980 F.E.L. & 1980 F.S.L. Sec. 6,  
T-20-S. R-29-E, Eddy County, New Mexico  
At proposed prod. zone: Same as surface

6. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 12 miles northeast of Carlsbad, New Mexico

7. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest dril. unit line, if any): 660 ft.

8. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR ABANDONED, OF THIS LEASE, FT.: 3,500 ft.

9. PROPOSED DEPTH: 1,500 ft.

10. NO. OF ACRES ADJACENT TO THIS WELL: 40 ac.

11. NO. OF ACRES ADJACENT TO THIS WELL: 40 ac.

12. ADVISE ON CABLE TOOLS: Cable

13. ELEVATION (Show whether D.F., H.T., G.A., etc.): 3270 GR

14. APPROVAL DATE WHEN WELL DEPTH: 1-29-71

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/2"	10 3/4"	42 lb.	160'	
10"	8 5/8"	24 lb.	400'	
8"	7"	23 lb.	1,000'	
6"			1,600'	

RECEIVED  
JAN 27 1971  
U.S. GEOLOGICAL SURVEY  
ALBUQUERQUE, NEW MEXICO

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present production zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface location and measured and true vertical depths. Give blowout preventer program, if any.

SIGNED: H. S. Dean TITLE: Geologist DATE: Jan 27, 1971

(This space for Federal or State office use)

PERMIT NO.

APPROVED  
JAN 27 1971  
F. L. DEERMA

THIS APPROVAL IS REVOKED IF OPERATIONS ARE NOT COMMENCED WITHIN 3 MONTHS.  
APR 15 1971  
See Instructions On Reverse Side

Subject to completion of 104' casing in 20' horizontal zone and cementing of 9" production casing and to not plug back until

LLEGIBLE

Form 1001  
(Rev. 1-61)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBJECT IS DUPLICATED  
(See also in-  
structions on  
reverse side)

Well Number

NM-0144506

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1. TYPE OF WELL: OIL ☐ GAS ☐ NAT ☒ Other \_\_\_\_\_  
2. TYPE OF COMPLETION: NEW WELL ☒ REPAIR ☐ REPERFORATE ☐ PLUG BACK ☐ REPT. REPAIR ☐ Other \_\_\_\_\_

3. NAME OF OPERATOR  
The Petroleum Corporation

4. ADDRESS OF OPERATOR  
3808 Lee Parkway, Dallas, Texas 75219

5. LOCATION OF WELL (State, County, Township, Range, Section, and Corner or other reference)  
At surface: UAR Cedar 7, 1980 PBL & 1980 PBL

At top seal, interval reported below

At total depth

14. PERMIT NO. DATE ISSUED  
Jan. 28, 1971

15. COUNTY IN STATE  
Hobby New Mexico

16. DATE PRODUCED 1/29/71 17. DATE P.A. REACHED 3/15/71 18. DATE COMPL. (Ready to prod.) P & A 19. ELEVATION (at base of well, sec. 1) 3270 GL 20. DEPTH (feet) 1,352

21. TOTAL DEPTH, TO A TVD 1,352 22. PLUG BACK P.A. TO A TVD P & A 23. IF MULTIPLE COMPL. HOW MANY? 24. INTERFALL (feet) 25. DEPTH (feet) 26. DEPTH (feet)

27. PRODUCING INTERVAL(S) OF THIS COMPLETION—TOP, BOTTOM, NAME (sec. and str.)  
None 28. WELL IS PRODUCING? No

29. TYPE ELECTRIC AND OTHER LOGS RUN  
Gamma Ray-Neutron 30. WELL IS PRODUCING? No

Casing Record (Report all changes and in case)					
Casing Size	Weight, lb/ft	Depth, ft (SS)	Depth, ft (SS)	Remarks	Log
18-5/8	48	20	17-1/2	Ready MIG	None
10-5/8	32-5/8	180	12-1/4	None	ALL
8-5/8	24	428-2	9-1/2	20 MIG	116

Liner Record				Stringer Record			
Size	Wt (lb)	Bottom (ft)	Remarks	Size	Wt (lb)	Bottom (ft)	Remarks
None				None			

31. PRODUCTION RECORD (Interval, sec. and str.)  
Plug and Abandon MAR 30 1971

Plug and Abandon

MAR 30 1971

O. G. C.

RECEIVED  
MAR 27 1971

32. PRODUCTION  
DATE FIRST PRODUCTION PRODUCTION METHOD (Pumping, gas lift, etc.)

DATE OF TEST	ROUGH TESTED	C-JOB'S SIZE	PROD'N. FOR TEST PERIOD	OIL—GAL.	GAS—MCF	WATER—GAL.	OTHER
PROD. TESTING PERIOD	CALCULATED 24-HOUR RATE	OIL—GAL.	GAS—MCF	WATER—GAL.	OTHER		

33. DESCRIPTION OF WELL (Name, size, type, etc.)  
34. LIST OF ATTACHMENTS

35. I hereby certify that the foregoing and attached information is complete and correct to the best of my knowledge and belief.

SIGNED: *Lucy C. [Signature]* TITLE: Petroleum Engineer DATE: March 16, 1971

(See Instructions and Specials for Additional Data to be Reported)

LLEGIBLE

# INSTRUCTIONS

1. The purpose of this form is to provide a means for recording and reporting the results of a well log. The log should be completed by the person who makes the log, or by a person who has been trained to do so. The log should be completed in the field, and should be submitted to the office as soon as possible after completion. The log should be completed in the following manner:

2. The log should be completed in the following manner:

3. The log should be completed in the following manner:

4. The log should be completed in the following manner:

5. The log should be completed in the following manner:

6. The log should be completed in the following manner:

7. The log should be completed in the following manner:

8. The log should be completed in the following manner:

9. The log should be completed in the following manner:

10. The log should be completed in the following manner:

11. The log should be completed in the following manner:

12. The log should be completed in the following manner:

13. The log should be completed in the following manner:

14. The log should be completed in the following manner:

15. The log should be completed in the following manner:

16. The log should be completed in the following manner:

17. The log should be completed in the following manner:

18. The log should be completed in the following manner:

19. The log should be completed in the following manner:

20. The log should be completed in the following manner:

21. The log should be completed in the following manner:

22. The log should be completed in the following manner:

23. The log should be completed in the following manner:

24. The log should be completed in the following manner:

25. The log should be completed in the following manner:

26. The log should be completed in the following manner:

27. The log should be completed in the following manner:

28. The log should be completed in the following manner:

29. The log should be completed in the following manner:

30. The log should be completed in the following manner:

31. The log should be completed in the following manner:

32. The log should be completed in the following manner:

33. The log should be completed in the following manner:

34. The log should be completed in the following manner:

35. The log should be completed in the following manner:

36. The log should be completed in the following manner:

37. The log should be completed in the following manner:

38. The log should be completed in the following manner:

39. The log should be completed in the following manner:

40. The log should be completed in the following manner:

41. The log should be completed in the following manner:

42. The log should be completed in the following manner:

43. The log should be completed in the following manner:

44. The log should be completed in the following manner:

45. The log should be completed in the following manner:

46. The log should be completed in the following manner:

47. The log should be completed in the following manner:

48. The log should be completed in the following manner:

49. The log should be completed in the following manner:

50. The log should be completed in the following manner:

51. The log should be completed in the following manner:

52. The log should be completed in the following manner:

53. The log should be completed in the following manner:

54. The log should be completed in the following manner:

55. The log should be completed in the following manner:

56. The log should be completed in the following manner:

57. The log should be completed in the following manner:

58. The log should be completed in the following manner:

59. The log should be completed in the following manner:

60. The log should be completed in the following manner:

61. The log should be completed in the following manner:

62. The log should be completed in the following manner:

63. The log should be completed in the following manner:

64. The log should be completed in the following manner:

65. The log should be completed in the following manner:

66. The log should be completed in the following manner:

67. The log should be completed in the following manner:

68. The log should be completed in the following manner:

69. The log should be completed in the following manner:

70. The log should be completed in the following manner:

71. The log should be completed in the following manner:

72. The log should be completed in the following manner:

73. The log should be completed in the following manner:

74. The log should be completed in the following manner:

75. The log should be completed in the following manner:

76. The log should be completed in the following manner:

77. The log should be completed in the following manner:

78. The log should be completed in the following manner:

79. The log should be completed in the following manner:

80. The log should be completed in the following manner:

81. The log should be completed in the following manner:

82. The log should be completed in the following manner:

83. The log should be completed in the following manner:

84. The log should be completed in the following manner:

85. The log should be completed in the following manner:

86. The log should be completed in the following manner:

87. The log should be completed in the following manner:

88. The log should be completed in the following manner:

89. The log should be completed in the following manner:

90. The log should be completed in the following manner:

91. The log should be completed in the following manner:

92. The log should be completed in the following manner:

93. The log should be completed in the following manner:

94. The log should be completed in the following manner:

95. The log should be completed in the following manner:

96. The log should be completed in the following manner:

97. The log should be completed in the following manner:

98. The log should be completed in the following manner:

99. The log should be completed in the following manner:

100. The log should be completed in the following manner:

## STANDARD OF RECORD LOGS

1. The purpose of this form is to provide a means for recording and reporting the results of a well log. The log should be completed by the person who makes the log, or by a person who has been trained to do so. The log should be completed in the field, and should be submitted to the office as soon as possible after completion. The log should be completed in the following manner:

POSITION	NO.	DEPTH	DESCRIPTION	CORRECTION DATA		
				DATE	AMOUNT	REMARKS
Yards	1186	TD	Reverse encountered @ 1130'. Well bore filled with water to within 600 feet of the surface. (CA-110, 1250 ppm)	Top of Cement and salt base of Salt Top of Yards	119' 100'	

LLEGIBLE





N. M. O. C. G. OFF.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

REPLY IN TRIPlicate  
TO THE DIRECTOR, U.S. GEOLOGICAL SURVEY  
WASHINGTON, D. C. 20540

FILE NUMBER  
NM-01446-4

SUNDRY NOTICES AND REPORTS ON WELLS

(This form is to be used for reports on wells drilled or to be drilled in a different way than the "APPLICATION FOR PERMIT" for such operations.)

1. NAME OF OPERATOR

The Petroleum Corporation

2. ADDRESS OF OPERATOR

3303 Lee Parkway, Dallas, Texas 75219

3. LOCATION OF WELL (Name location, State and in accordance with the State requirements.)

Unit Letter "J", 1980' FBL & 1980' FSL, Section 6,  
T20S-R29E, Eddy County, New Mexico

4. DEPTH OF WELL

3270 GR

5. IS THERE A CHANGE IN THIS NAME

6. IS THERE A CHANGE IN THIS NAME

7. NAME OF TRAIL NAME

Superior-Federal

8. WELL NO.

1

9. NAME AND TYPE OF WELL

Wildcat

10. NAME, P. L. N., OR P. L. AND

Sec. 6, T20S-R29E

11. NAME OF COUNTY, STATE

Eddy

New Mexico

Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

12. NATURE OF EXTENSION TO

13. DISSEMINATION REPORT BY

14. LOST WELL KILNDRICK

15. LOST OR OTHER LOSS

16. WATER POLLUTION

17. ADDITIONAL DATA

18. PROPOSED TREATMENT

19. ADDITIONAL TREATMENT

20. PROPOSED TREATMENT

21. ADDITIONAL TREATMENT

22. ADDITIONAL TREATMENT

23. ADDITIONAL TREATMENT

24. ADDITIONAL TREATMENT

25. ADDITIONAL TREATMENT

26. ADDITIONAL TREATMENT

27. ADDITIONAL TREATMENT

28. ADDITIONAL TREATMENT

29. ADDITIONAL TREATMENT

30. ADDITIONAL TREATMENT

31. ADDITIONAL TREATMENT

32. ADDITIONAL TREATMENT

33. ADDITIONAL TREATMENT

17. EXAMINE RECORDS IN CONNECTION WITH THIS WELL. ALL INFORMATION obtained as a result of this examination shall be reported to the nearest office of the U.S. Geological Survey, and a copy of the report shall be submitted to the State Department of Natural Resources, and a copy of the report shall be submitted to the State Department of Natural Resources.

Set 33 ass. cement plug from 1352' to 1252'.

Set 33 ass. cement plug from 472' to 372'.

Pulled 216' of 8-5/8 casing.

Pulled 180' of 10-3/4 casing.

Set 10 ass. cement plug in surface and installed well marker. Changed location (ready for inspection).

RECEIVED

MARCH 1971

U. S. GEOLOGICAL SURVEY  
ALBUQUERQUE, NEW MEXICO

18. I hereby certify that the foregoing is true and correct.

SIGNED

*James C. Shannon*

Petroleum Engineer

DATE: March 24, 1971

THIS FORM IS FOR THE USE OF THE STATE OFFICE AND

APPROVED BY

DATE

DATE

APPROVED BY  
DATE  
OFFICE

\*See Instructions on Reverse Side

LLEGIBLE

# Presidio Oil Company

3131 Turtle Creek Blvd. • Suite 400 • Dallas, Texas 75219-5415 • (214) 528-5898 • Facsimile (214) 528-2160

## SUBSIDIARIES

Peake Operating Company  
Presidio Energy, Inc.  
Presidio Exploration, Inc.  
The Desana Corporation  
The Petroleum Corp. of Delaware

August 15, 1989

Downhole Commingling  
Superior Federal No.6  
Unit N, Sec. 6, T20S, R29E  
Eddy County, New Mexico

New Mexico Oil Conservation Division  
P. O. Box 2088 Room 206  
Sante Fe, NM 87504

Attention: Mr. David R. Catanach

The Petroleum Corporation of Delaware requests an exception to New Mexico Oil Conservation Division Rule 303-A to permit downhole commingling of production from the East Burton Flat-Morrow gas pool and the East Burton Flat-Atoka gas pool in the above captioned wellbore. This matter has been set for consideration at the August 23, 1989 examiner hearing.

Superior Federal Well No. 6 is currently classified a dually producing well from the Strawn and Morrow gas pools of the East Burton Flat Field in Eddy County, New Mexico. The Morrow has produced up the tubing since initially being completed in March of 1982 through Morrow perforations from 11,177' to 11,314'. Additional Morrow perforations were made in 3 zones during a workover in May of 1987. The casing was perforated with a through tubing gun while the downhole production equipment remained in place. At that time the geologist had interpreted all three sets of perforations to be Morrow pay. Recently we have been informed that the upper most set of perforations (10,951'-56') added during that May 1987 workover are actually in the Atoka Horizon as recognized by the State of New Mexico. Since the new zones were all perforated at the same time. Separate production tests and isolated reservoir pressures are not available. Also, separate testing of the zones now would be expensive and could potentially result in the loss of production by damaging the Morrow reservoir or partial loss of the wellbore. Therefore, we ask that no such requirement be imposed.

The completed NMOC forms C-107 and C-115 for the Atoka are attached, as is the data described in Rule 303 (c) (2). All offset operators have been notified by copy of this letter and its attachments.

Sincerely,



Ronald P. Henderson

RPH/jlw

# *Presidio Oil Company*

---

3131 Turtle Creek Blvd • Suite 400 • Dallas, Texas 75219-5415 • 214/528-5898 • Facsimile 214/528-2160

## SUBSIDIARIES

Peake Operating Company  
Presidio Energy, Inc.  
Presidio Exploration, Inc.  
The Desana Corporation  
The Petroleum Corp. of Delaware

### ATTACHMENT NO. 1 SUPERIOR FEDERAL WELL NO. 6 DOWNHOLE COMMINGLING - DATA REQUIRED

To obtain approval for downhole commingling, we have enclosed the following data pursuant to Rule 303 (c)(2) (a through j):

1. Company's Name and Address:

The Petroleum Corporation of Delaware  
3131 Turtle Creek Blvd. Ste. #400  
Dallas, Texas 75219-5415

2. Lease Name, Well Number, Well Location and Name of Pools to be commingled:

Superior Federal Well No. 6, Unit N, Section 6, T20S, R29E, Eddy County, New Mexico. Pools to be commingled: East Burton Flat Atoka Gas Pool and East Burton Flat Morrow Gas Pool.

3. A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases:

Attached.

4. A 24-hour productivity test of Division Form C-116 showing the amount of oil, gas and water produced from each zone:

Test is on total stream from combined Atoka and Morrow production. Division of production based on allocation formula from production before and after perforations were added in May of 1987.

5. The new perforations were added in May of 1987 and produced commingled with Morrow production until the present. Separate production curves therefore do not exist. A production curve for the Superior Federal No. 6 Morrow from initial completion to present is attached. The allocation formula for Atoka production is attached and shows the Atoka interval to be producing 25 MCFGPD and all other Morrow perforations producing 510 MCFGPD. A complete description of the production tests before and after the May, 1987 workover and the description and results of the June, 1987 acid treatment are also attached.

6. Current bottomhole pressures are not available due to the history of the zones being produced together. We are requesting relief from the requirement to provide separate production and pressure data on each

# Presidio Oil Company

3131 Turtle Creek Blvd • Suite 400 • Dallas, Texas 75219-5415 • (214) 528-5898 • Facs. m/f (214) 528-2160

## SUBSIDIARIES

Peake Operating Company  
Presidio Energy, Inc.  
Presidio Exploration, Inc.  
The Desana Corporation  
The Petroleum Corp. of Delaware

individual zone. Testing each zone is economically prohibitive due to the small volume of Atoka production (approximately 25 MCFGPD). Testing could also result in the loss of production from the Morrow zones.

A history of the stabilized shut in tubing pressures is attached. This graph indicates a 170 psi increase in shut in pressure after the workover. If the Lower pressure zone had been left to decline alone until August of 1989 the SITP would be 680 psi. The combined SITP of the zones together extrapolates to 750 psi in August of 1989. There is not a 50% difference in pressures.

This is significant in that the well produces through a compressor and this will prevent crossflow from occurring because the flowing tubing pressure is pulled down to about 230 psi.

7. Descriptions of the gas analysis before and after the workover are attached. The gas samples are almost identical comparing gas just before the work and gas now.

The streams have also been commingled downhole and at the surface and have produced no compatibility problems.

8. The 62 MCFGPD increase in production that resulted from the additional perforations is the only link to estimating Atoka gas production. Using the method described in the allocation formula showed an estimated production of 25 MCFGPD from the Atoka interval.

The sum of the value of the individual streams is the commingled production that has been producing since the May, 1987 workover.

9. A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such a formula:

The following allocation percentages are suggested based upon the ratio of production from each zone:

	Expected Production	
	Gas	
Atoka	25 MCF/D	(4.7%)
Morrow	510 MCF/D	(95.3%)
Commingled	535 MCF/D	(100.0%)



# *Presidio Oil Company*

---

3131 Turtle Creek Blvd • Suite 400 • Dallas, Texas 75219-5415 • 214/528-5898 • Facsimile: 214/528-2160

## SUBSIDIARIES

Peake Operating Company  
Presidio Energy, Inc.  
Presidio Exploration, Inc.  
The Desana Corporation  
The Petroleum Corp. of Delaware

10. A statement that all offset operators and in the case of a well on Federal Land, the United States Geological Survey, has been notified in writing of the proposed commingling:

By copy of this letter, we are notifying the offset operators of this proposed commingling.

11. in addition, working interest and royalty interest ownership in all zones are the same.
12. Also attached is a stratigraphic cross section of the Atoka Formation through the immediate area. The section illustrates the stratigraphic nature of the locally-developed Atoka sand. The neutron-density "cross-over" gas/effect is only evident in the subject well. Additionally, the offsetting wells exhibit less than 4% effective porosity for the correlative sand.
13. The structure map, on the top of this Atoka sand depicts a nosing or flattening of the regional dip at the Superior Federal No. 6 well, indicative of a stratigraphic trap.



OCD Case No. 9663  
List of Offset Operators

International Oil and Gas Corporation  
16825 Northchase Dr., Ste. 1400  
Houston, Texas 77060-6001

Mobil Oil Company  
P. O. Box 633  
Midland, Texas 79702

William Moss  
3811 Turtle Creek Blvd.  
Suite 700  
Dallas, Texas 75219

American Exploration  
4500 Republic Bank Center  
700 Louisiana  
Houston, Texas 77002

Hal Dean  
One First City Ctr.  
Suite 1440  
Midland, Texas 79701

Texaco U.S.A.  
P. O. Box 52332  
Texaco Building  
Houston, Texas 77052

Manzano Oil Corporation  
P. O. Box 2107  
Roswell, New Mexico 88202

Permian Basin Investment Corporation  
648 Petroleum Bldg.  
Roswell, New Mexico 88201

Yates Petroleum Corporation  
Yates Building  
105 South 4th  
Artesia, New Mexico 88210

HNG Oil Company  
P. O. Box 2267  
Midland, Texas 79702

Texas Oil and Gas Corporation  
1700 Pacific, LB10  
Dallas, Texas 75201

Marathon Oil Company  
539 S. Main Street  
Findlay, Ohio 45840

Submit 2 copies to Appropriate  
District Office.  
DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240  
DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210  
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-116  
Revised 1/1/89

## OIL CONSERVATION DIVISION

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

### GAS - OIL RATIO TEST

Operator THE PETROLEUM CORPORATION OF DELAWARE		Pool EAST BURTON FLAT MORROW		County EDDY											
Address 3131 TURTLE CREEK BLVD #400, DALLAS, TX. 75219-5415		TYPE OF TEST - (X)		Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/>											
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW- ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBL.		
		U	S	T						R	WATER BBL.	GRAV. OIL		OIL BBL.	GAS MCF.
SUPERIOR FEDERAL	6	N	6	20S	29E	4/28/89	F	230		24	0	56.6	1.5	525	350,000
						5/29/89	F	200		24	0	57.0	1.4	516	369,000
						6/26/89	F	250		24	0	56.7	1.5	532	355,000

#### Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

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

*Ronald P. Henderson*  
Signature

Printed name and title

*Ronald P. Henderson Operations Engineer*

8/14/89

Date

214 523 5898

Telephone No.

Submit 2 copies to Appropriate  
District Office.  
DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240  
DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210  
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department  
**OIL CONSERVATION DIVISION**  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

Form C-116  
Revised 1/1/89

**GAS - OIL RATIO TEST**

Operator THE PETROLEUM CORPORATION OF DELAWARE		Pool EAST BURTON FLAT ATOKA		County EDDY											
Address 3131 TURTLE CREEK BLVD. #400, DALLAS, TX. 75219-5415		TYPE OF TEST - (X) <input checked="" type="checkbox"/> S <input type="checkbox"/> K <input type="checkbox"/> S		Completion <input type="checkbox"/> Scheduled <input type="checkbox"/> Special <input checked="" type="checkbox"/> XXX											
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW. ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBL.		
		U	S	T						R	WATER BBL.S.	GRAV. OIL		OIL BBL.S.	GAS M.C.F.
SUPERIOR FEDERAL	6	N	6	20S	29E	4/28/89 F	1 1/2"	230		24	0	56.6	0.07	26	350,000
						5/29/89 F	1 1/2"	200		24	0	57.0	0.07	25	369,000
						6/26/89 F	1 1/2"	250		24	0	56.7	0.07	26	355,000

**Instructions:**

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

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

*Ronald P. Henderson*  
Signature

RONALD P. HENDERSON  
Printed name and title

8/14/89  
Date

214 523 5393  
Telephone No.



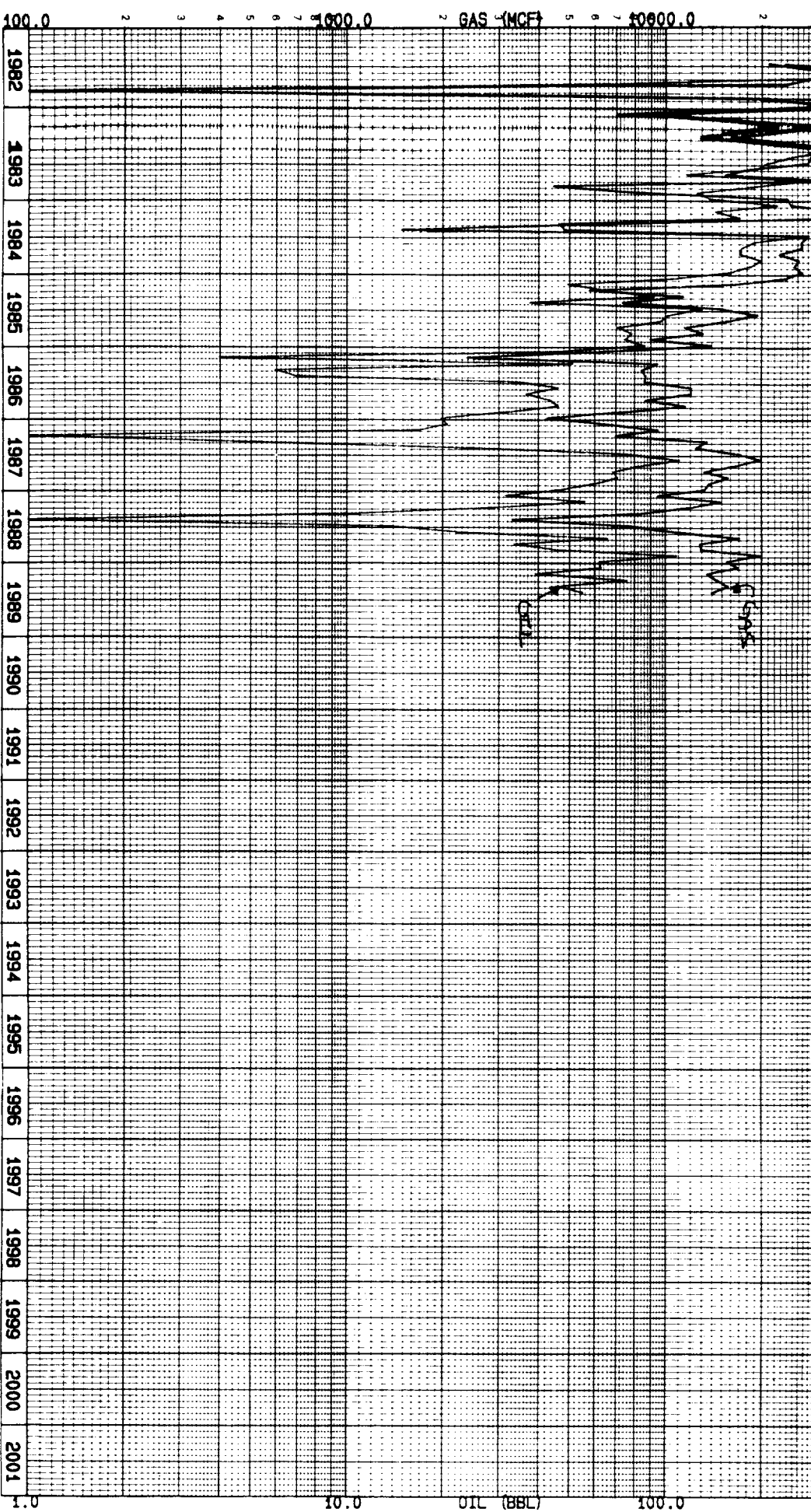
Date: 08/14/89  
Time: 17:32.52

# PRODUCTION

File: NM.DSF  
Get#: 56

SUPERIOR FEDERAL #6N  
BURTON FLAT, E (MORROW)  
EDDY CO., NEW MEXICO  
THE PETROLEUM CORP

CASE: SUPERIOR FED. #6N NM015BURFEDIMORWPD PDC



F.R. (DIL)

F.R. (CALIPER)

F.R. (MSFL)

11500

FILE

5

		LLD (QHMM)	TENS (LB)
		2000.	200000 10000. 0.
GR (GAPI)		MSFL (QHMM)	
100.0	200.0	0.2000	2000
CALI (IN)		LLS (QHMM)	
6.000	16.00	0.2000	2000
GR (GAPI)		LLD (QHMM)	
0.0	100.0	0.2000	2000

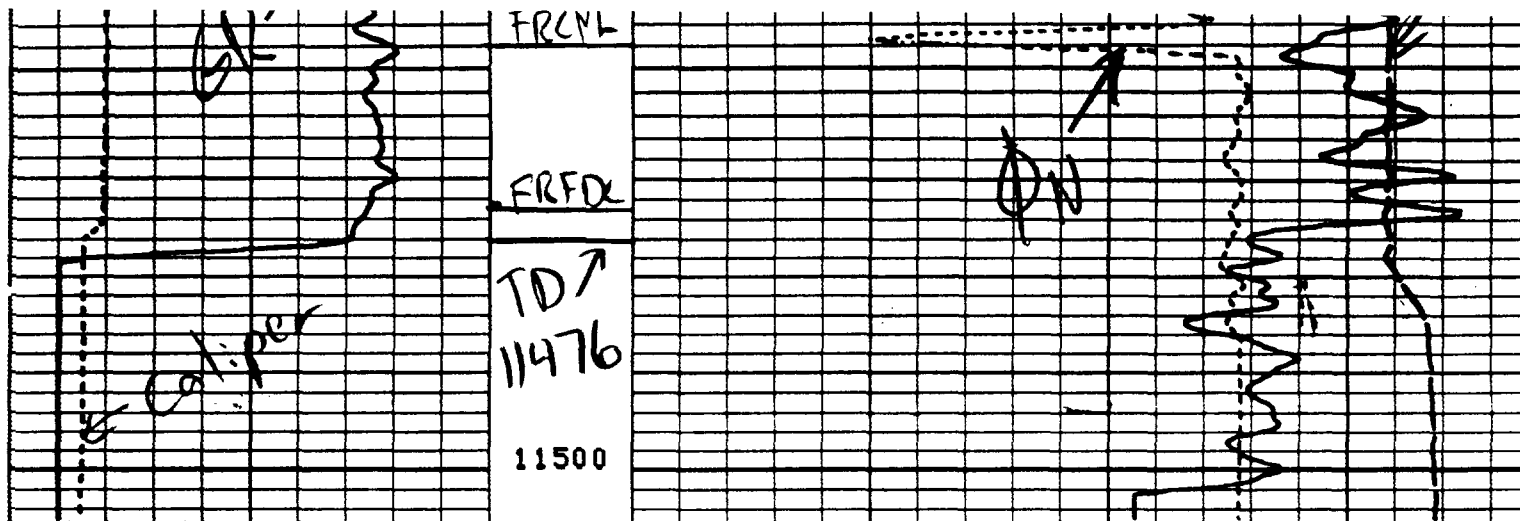
# SENSOR MEASURE POINT TO TENSION REFERENCE POINT

CALI	3.7	FEET	GR	33.9	FEET
DI90	14.6	FEET	DV90	14.6	FEET
SI90	14.6	FEET	SV90	14.6	FEET
DIO	14.6	FEET	DV0	14.6	FEET
SIO	14.6	FEET	SV0	14.6	FEET
LLS	14.6	FEET	TENS	.0	FEET
CMSF	1.7	FEET	LLD	14.6	FEET
II	1.7	FEET			

# PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
SPT	STAN		BS	7.875	IN
DD	0.0		BHS	OPEN	

		LLD (QHMM)	TENS (LB)
		2000.	200000 10000. 0
GR (GAPI)		MSFL (QHMM)	
100.0	200.0	0.2000	200
CALI (IN)		LLS (QHMM)	
6.000	16.00	0.2000	200



FILE

4

Detail Log

GR (GAPI)		TENS(LB )	
100.0	200.0	10000.	0
CALI(IN )		NPHI(Lime)	
6.000	16.00	0.3000	-0.1
GR (GAPI)		DPHI(Lime)	
0.0	100.0	0.3000	-0.1

SENSOR MEASURE POINT TO TENSION REFERENCE POINT

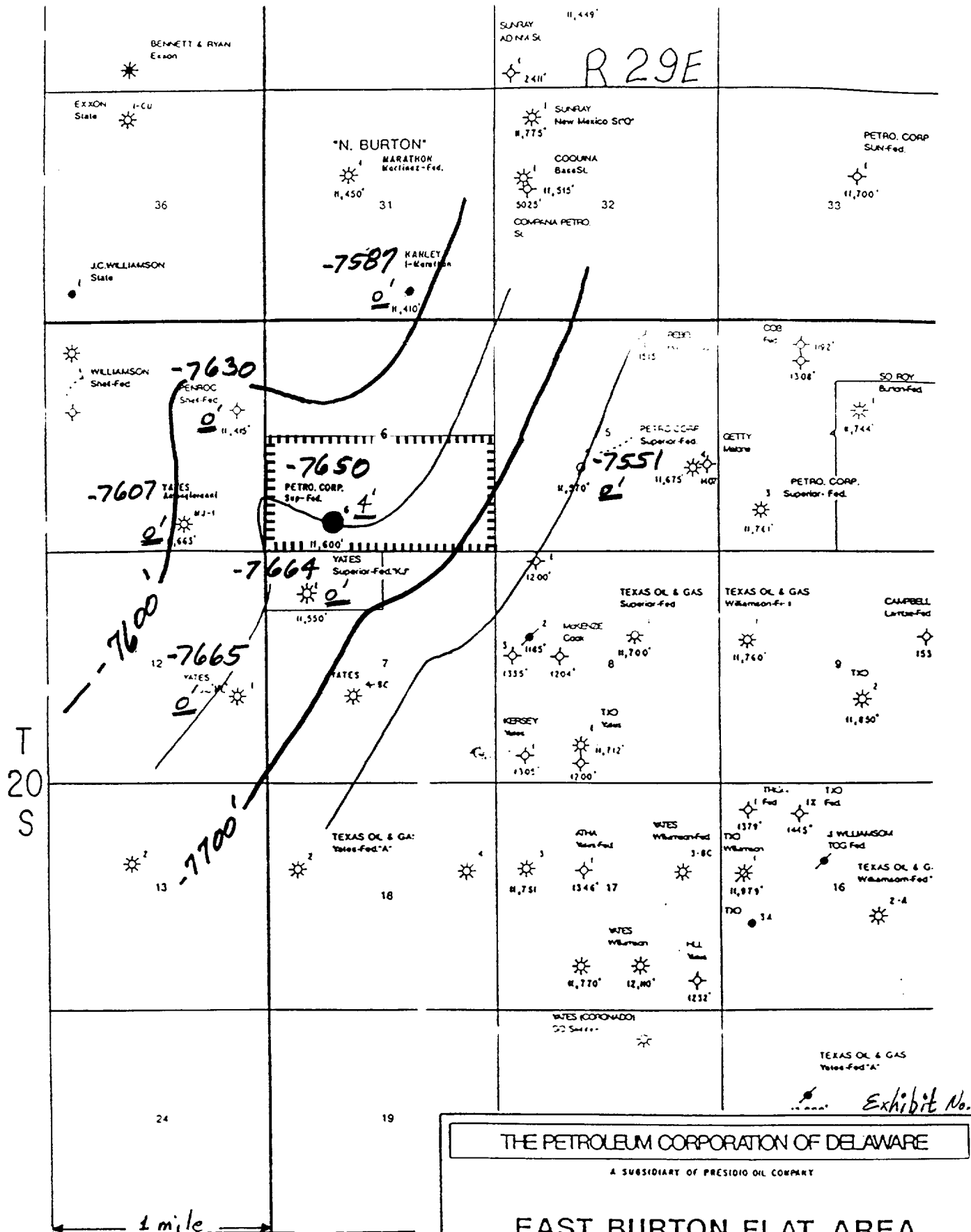
NCNL 18.3 FEET  
FFDC 3.0 FEET  
CALI 3.0 FEET  
NRAT 18.3 FEET

GR 26.8 FEET  
FCNL 18.3 FEET  
NFDC 3.0 FEET  
TENS .0 FEET

PARAMETERS

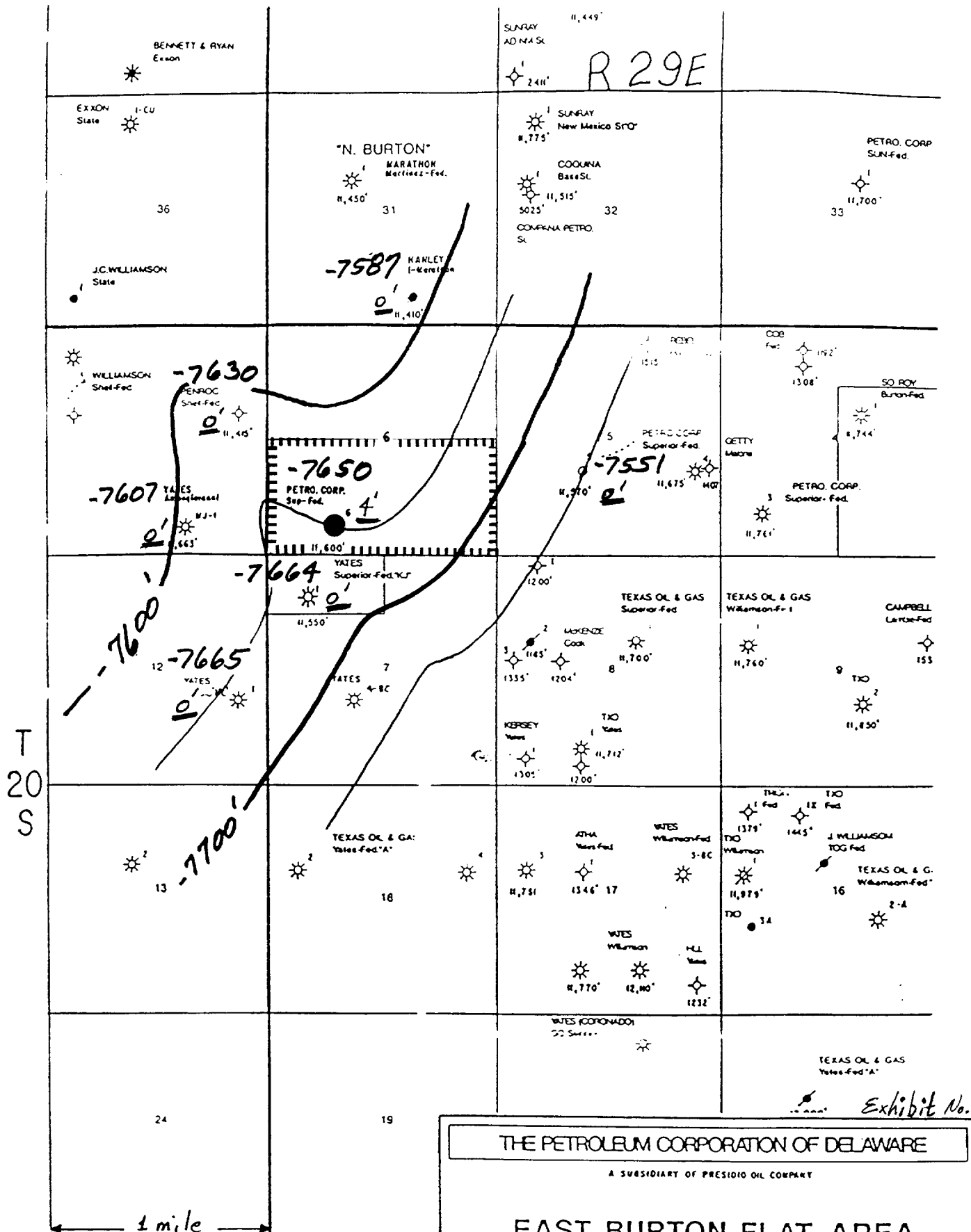
NAME VALUE UNIT  
PSNR 2.328  
MATR LIME  
MDEN 2.710 G/C3  
BHF WATE  
DO 0.0

NAME VALUE UNIT  
BS 7.875 IN  
HC CALI  
FD 1.100 G/C3  
FDCC ALLO  
BHS OPEN



**4': NET FEET BASAL  
ATOKA SAND  
SHOWING GAS-EFFECT OF  
Neutron-Density CrossOver**

THE PETROLEUM CORPORATION OF DELAWARE  
A SUBSIDIARY OF PRESIDIO OIL COMPANY  
**EAST BURTON FLAT AREA**  
EDDY COUNTY, NEW MEXICO  
**STRUCTURE MAP**  
TOP OF Basal Atoka Sand in  
Sup. -Fed. #6, Sec. 6 - T20S-R29E  
CI=50' By: Michael L. Dusing 5/17/89



**4' : NET FEET BASAL  
ATOKA SAND  
SHOWING GAS-EFFECT OF  
Neutron-Density CrossOver**

THE PETROLEUM CORPORATION OF DELAWARE  
A SUBSIDIARY OF PRESIDIO OIL COMPANY

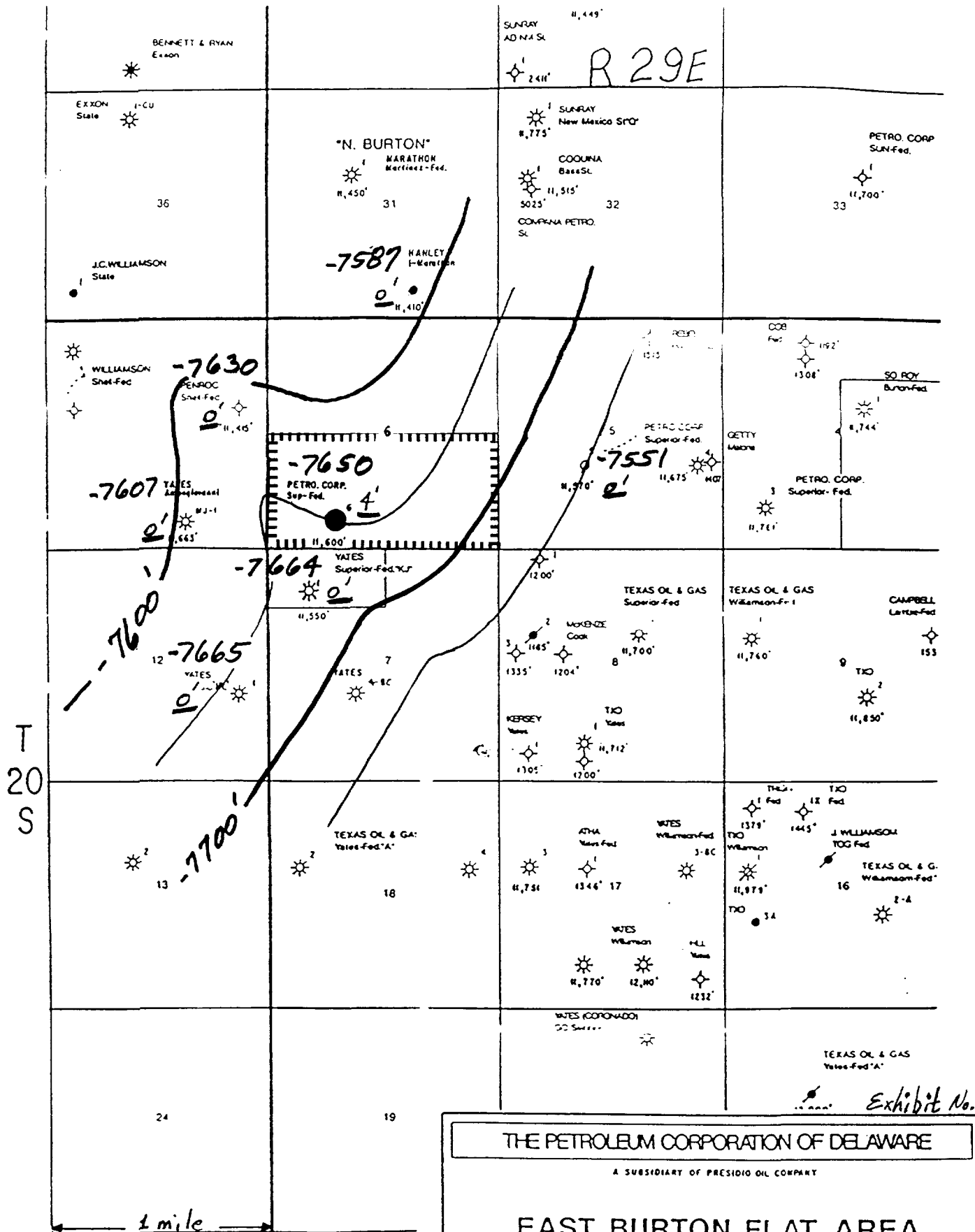
**EAST BURTON FLAT AREA**  
EDDY COUNTY, NEW MEXICO

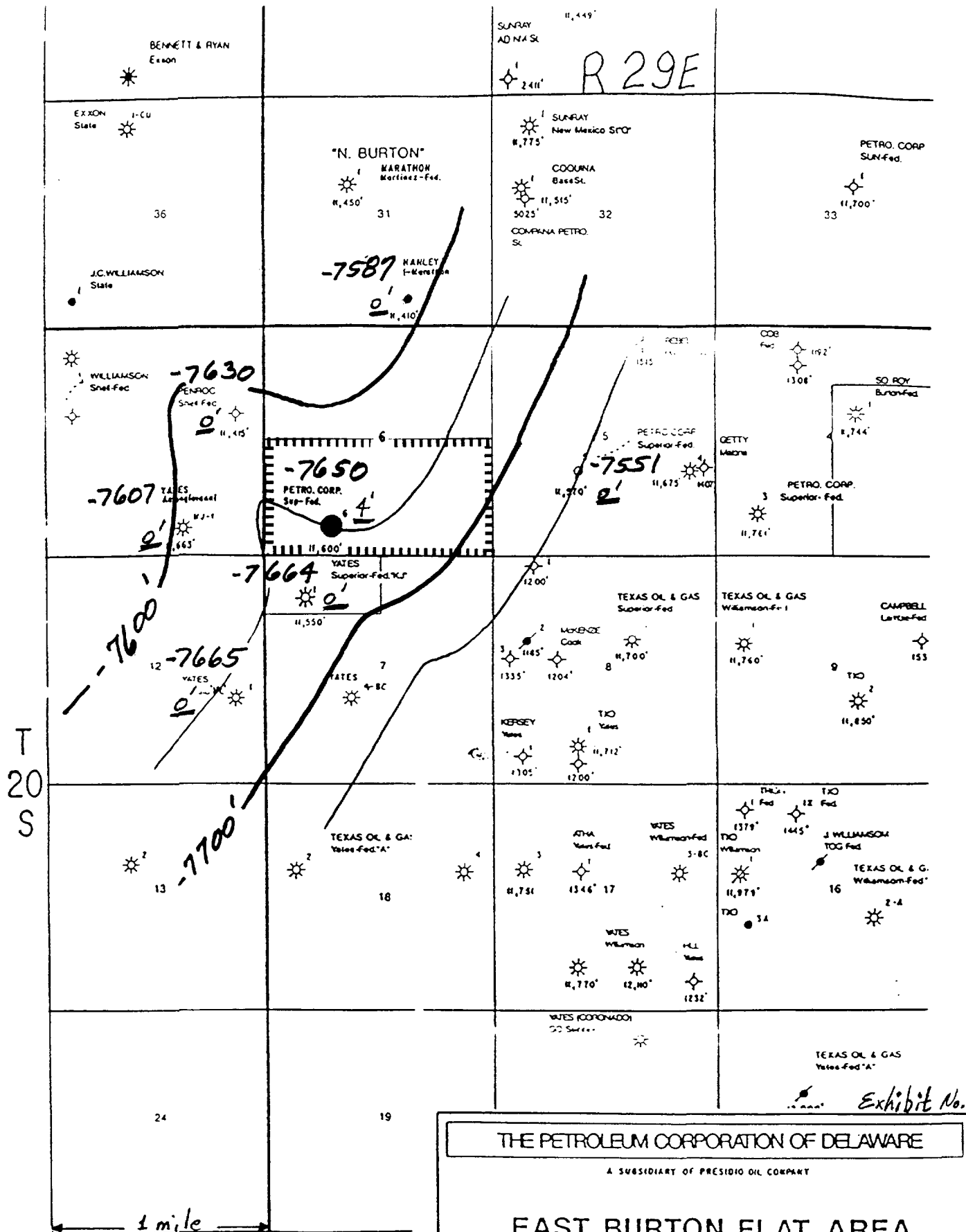
**STRUCTURE MAP**  
TOP OF Basal Atoka Sand in  
Sup.-Fed. #6, Sec. 6 - T20S-R29E

CI=50' By: Michael L. Dusing 5/17/89









4': NET FEET BASAL  
ATOKA SAND  
SHOWING GAS-EFFECT OF  
Neutron-Density CrossOver

THE PETROLEUM CORPORATION OF DELAWARE  
A SUBSIDIARY OF PRESIDIO OIL COMPANY

**EAST BURTON FLAT AREA**  
EDDY COUNTY, NEW MEXICO  
**STRUCTURE MAP**  
TOP OF Basal Atoka Sand in  
Sup.-Fed. #6, Sec. 6-T20S-R29E  
CI=50' By: Michael L. Dusing 5/17/89







A

CORRELATION CHART	
FORMATION	DEPTH
ATOKA	0-100
ATOKA	100-200
ATOKA	200-300
ATOKA	300-400
ATOKA	400-500
ATOKA	500-600
ATOKA	600-700
ATOKA	700-800
ATOKA	800-900
ATOKA	900-1000

CORRELATION CHART	
FORMATION	DEPTH
ATOKA	0-100
ATOKA	100-200
ATOKA	200-300
ATOKA	300-400
ATOKA	400-500
ATOKA	500-600
ATOKA	600-700
ATOKA	700-800
ATOKA	800-900
ATOKA	900-1000

CORRELATION CHART	
FORMATION	DEPTH
ATOKA	0-100
ATOKA	100-200
ATOKA	200-300
ATOKA	300-400
ATOKA	400-500
ATOKA	500-600
ATOKA	600-700
ATOKA	700-800
ATOKA	800-900
ATOKA	900-1000

CORRELATION CHART	
FORMATION	DEPTH
ATOKA	0-100
ATOKA	100-200
ATOKA	200-300
ATOKA	300-400
ATOKA	400-500
ATOKA	500-600
ATOKA	600-700
ATOKA	700-800
ATOKA	800-900
ATOKA	900-1000

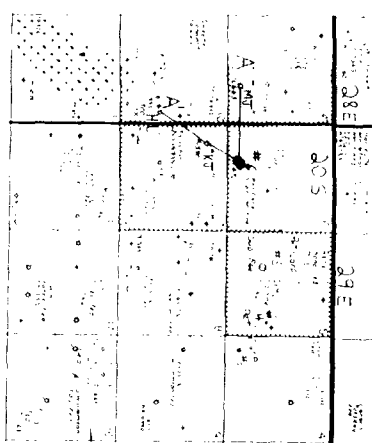
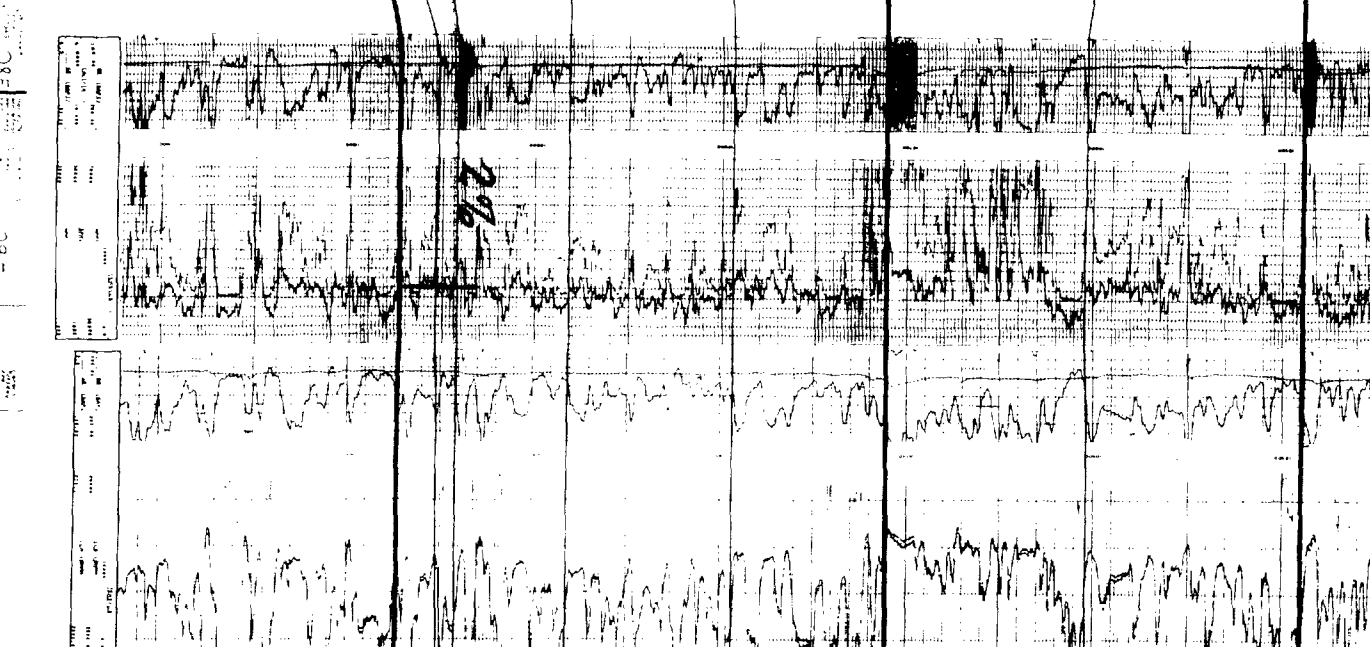
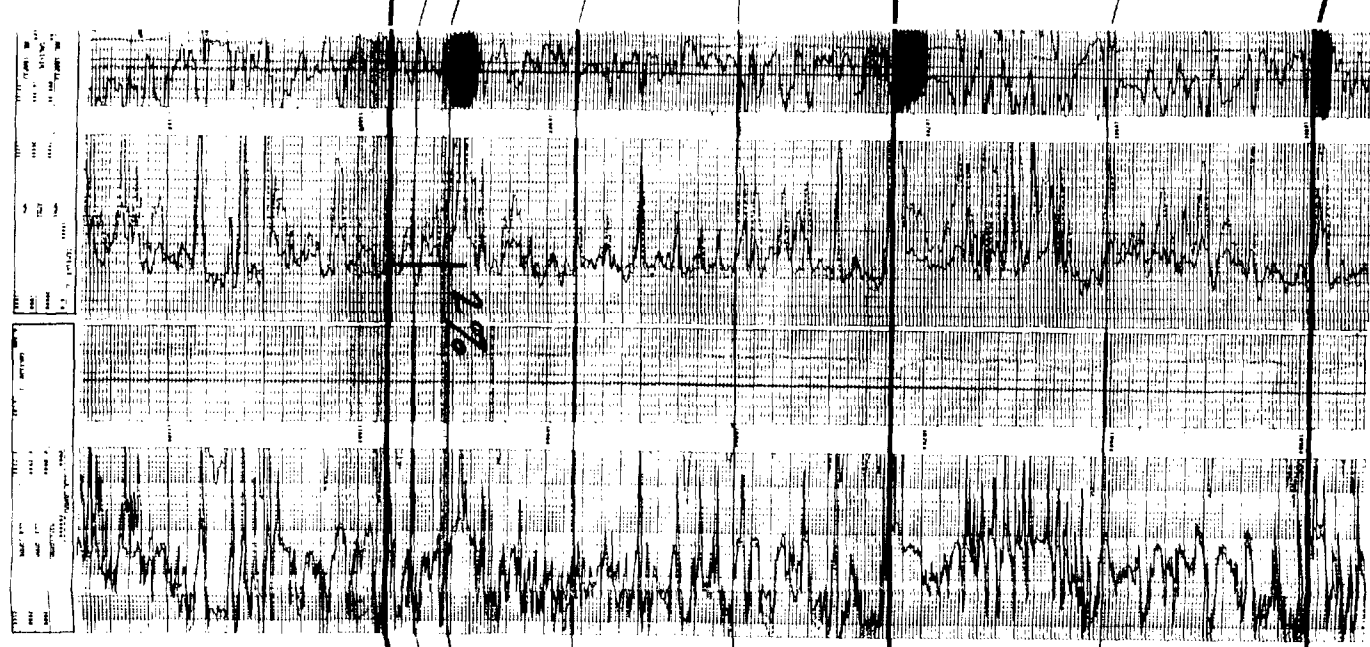
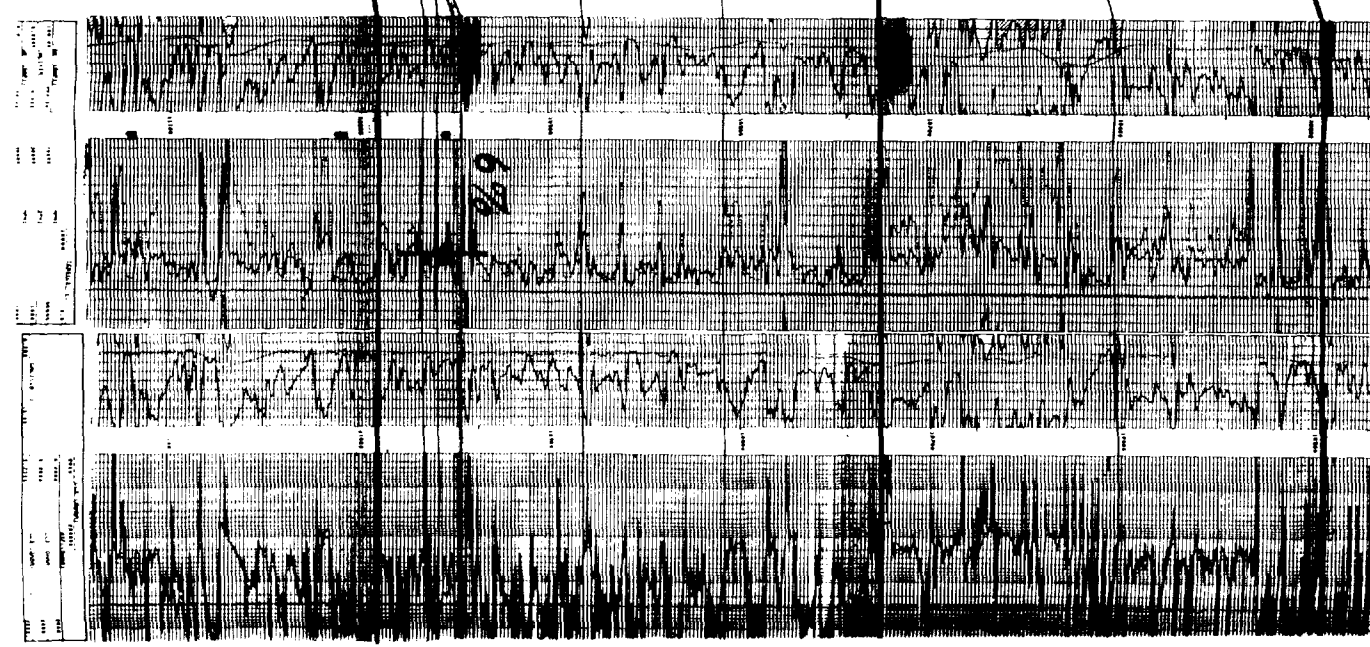
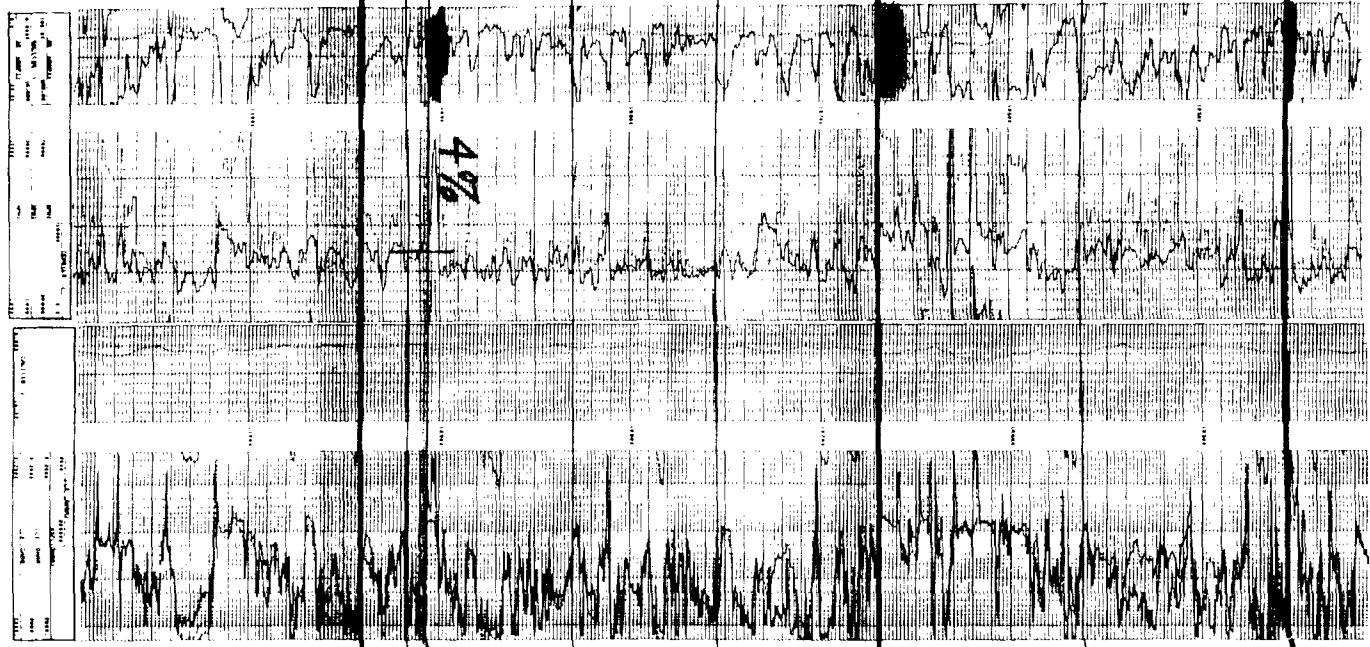
CORRELATION CHART	
FORMATION	DEPTH
ATOKA	0-100
ATOKA	100-200
ATOKA	200-300
ATOKA	300-400
ATOKA	400-500
ATOKA	500-600
ATOKA	600-700
ATOKA	700-800
ATOKA	800-900
ATOKA	900-1000

CORRELATION CHART	
FORMATION	DEPTH
ATOKA	0-100
ATOKA	100-200
ATOKA	200-300
ATOKA	300-400
ATOKA	400-500
ATOKA	500-600
ATOKA	600-700
ATOKA	700-800
ATOKA	800-900
ATOKA	900-1000

CORRELATION CHART	
FORMATION	DEPTH
ATOKA	0-100
ATOKA	100-200
ATOKA	200-300
ATOKA	300-400
ATOKA	400-500
ATOKA	500-600
ATOKA	600-700
ATOKA	700-800
ATOKA	800-900
ATOKA	900-1000

CORRELATION CHART	
FORMATION	DEPTH
ATOKA	0-100
ATOKA	100-200
ATOKA	200-300
ATOKA	300-400
ATOKA	400-500
ATOKA	500-600
ATOKA	600-700
ATOKA	700-800
ATOKA	800-900
ATOKA	900-1000

A



THE PETROLEUM CORPORATION  
A SUBSIDIARY OF PETROLIUM COMPANY  
STRATIGRAPHIC SECTION  
SEC. 6-20S-29E  
Eddy Co., New Mexico  
Geology M.L. Duving 5/15/89

MORROW LINE  
STATE TOP

STATE DATUM

ATOKA

A

WELL NAME	
WELL NO.	
DATE	
TIME	
LOCATION	
DEPTH	
DIP	
STRIKE	
TOWNSHIP	
RANGE	
SECTION	
COUNTY	
STATE	
COUNTRY	

WELL NAME	
WELL NO.	
DATE	
TIME	
LOCATION	
DEPTH	
DIP	
STRIKE	
TOWNSHIP	
RANGE	
SECTION	
COUNTY	
STATE	
COUNTRY	

WELL NAME	
WELL NO.	
DATE	
TIME	
LOCATION	
DEPTH	
DIP	
STRIKE	
TOWNSHIP	
RANGE	
SECTION	
COUNTY	
STATE	
COUNTRY	

WELL NAME	
WELL NO.	
DATE	
TIME	
LOCATION	
DEPTH	
DIP	
STRIKE	
TOWNSHIP	
RANGE	
SECTION	
COUNTY	
STATE	
COUNTRY	

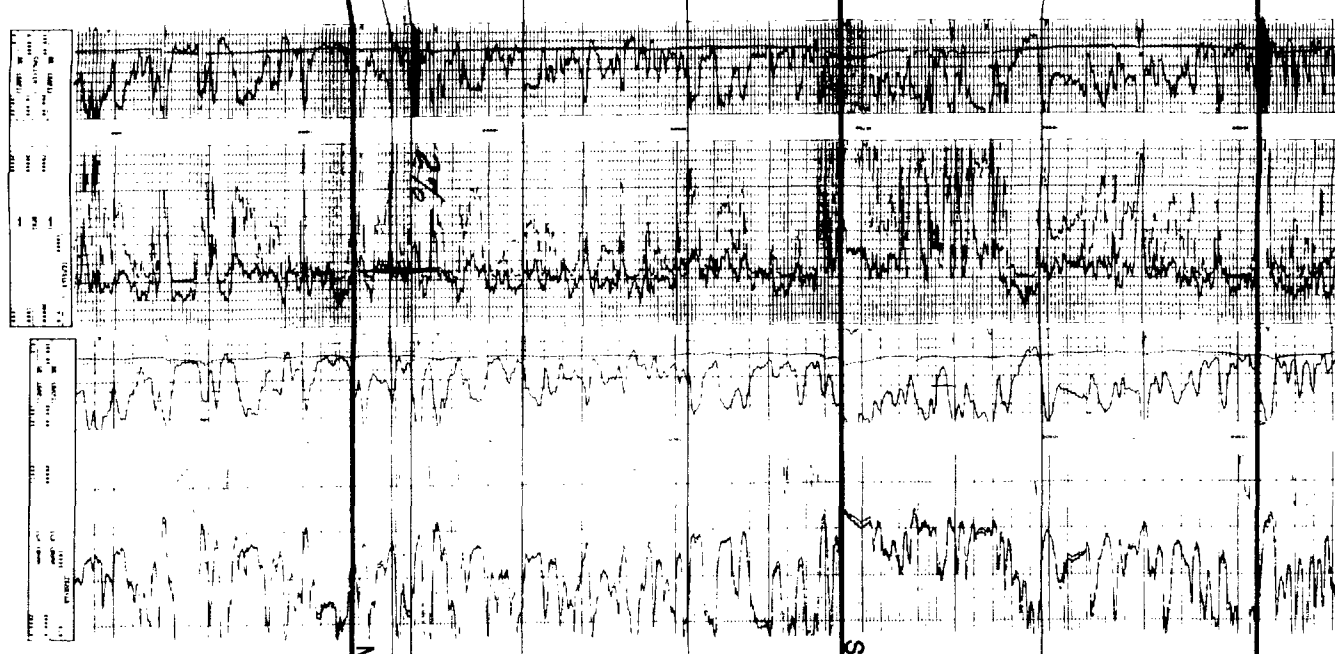
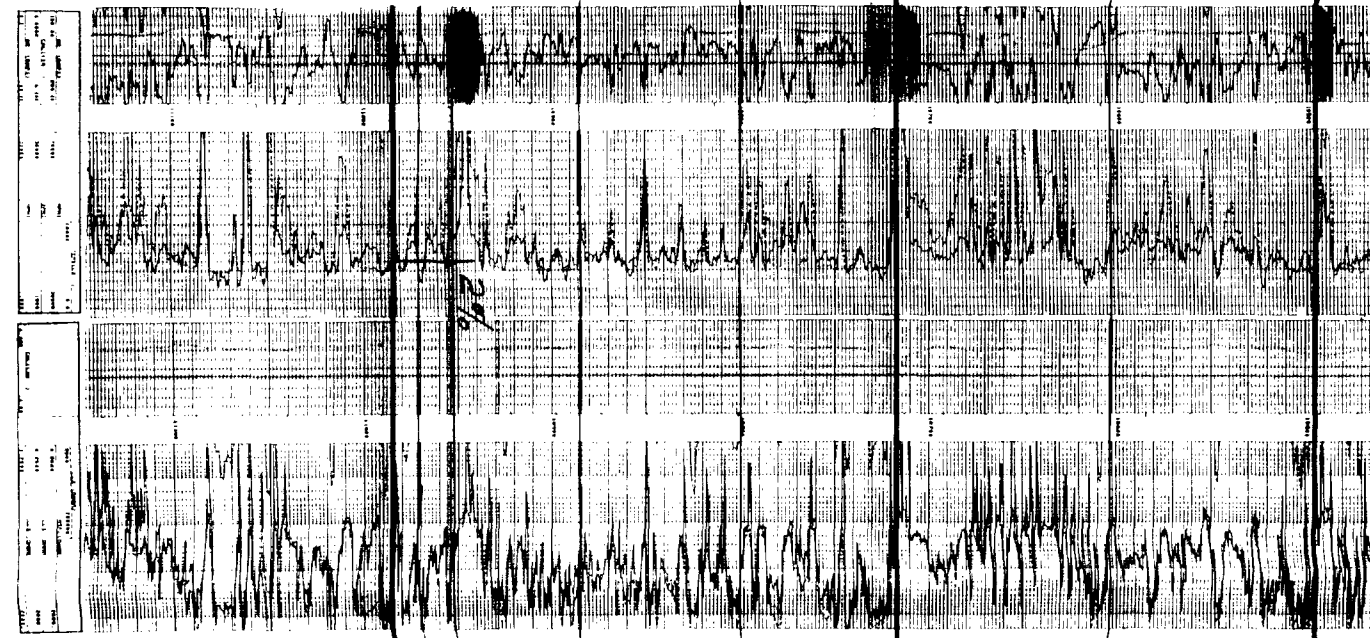
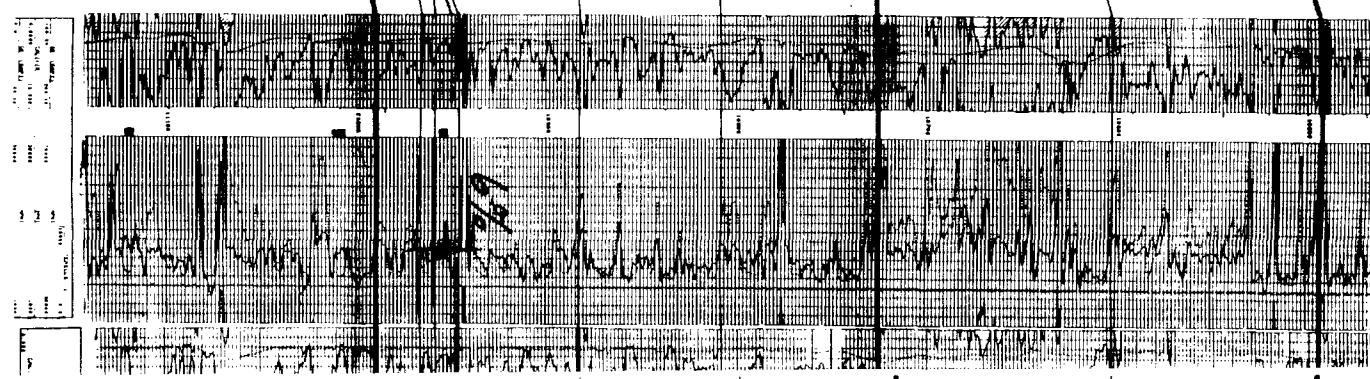
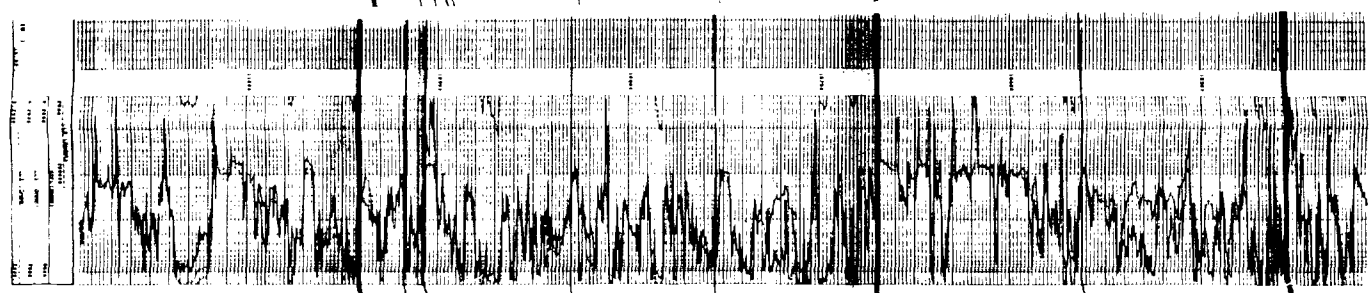
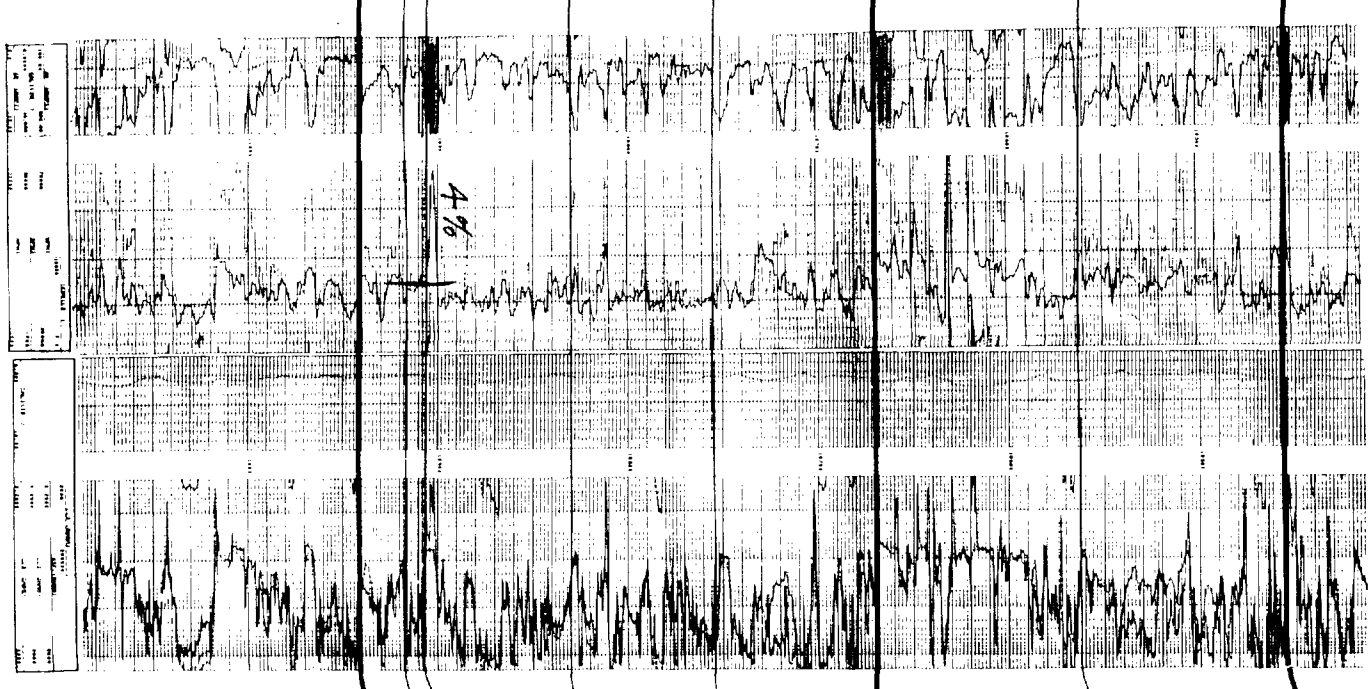
WELL NAME	
WELL NO.	
DATE	
TIME	
LOCATION	
DEPTH	
DIP	
STRIKE	
TOWNSHIP	
RANGE	
SECTION	
COUNTY	
STATE	
COUNTRY	

WELL NAME	
WELL NO.	
DATE	
TIME	
LOCATION	
DEPTH	
DIP	
STRIKE	
TOWNSHIP	
RANGE	
SECTION	
COUNTY	
STATE	
COUNTRY	

WELL NAME	
WELL NO.	
DATE	
TIME	
LOCATION	
DEPTH	
DIP	
STRIKE	
TOWNSHIP	
RANGE	
SECTION	
COUNTY	
STATE	
COUNTRY	

WELL NAME	
WELL NO.	
DATE	
TIME	
LOCATION	
DEPTH	
DIP	
STRIKE	
TOWNSHIP	
RANGE	
SECTION	
COUNTY	
STATE	
COUNTRY	

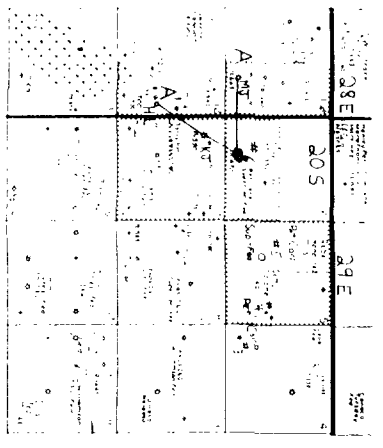
A'



MORROW LINE  
STATE TOP

STATE DATUM

ATOKA

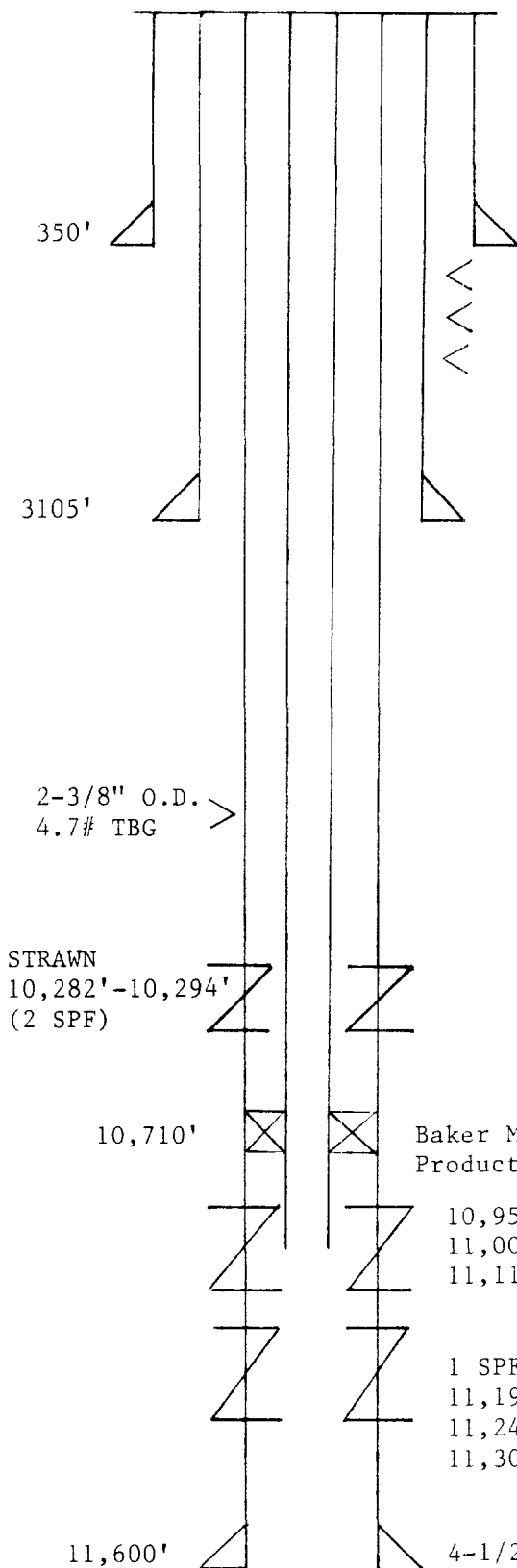


THE PETROLEUM CORPORATION  
OF DELAWARE  
A SUBSIDIARY OF PETROBRAS S.A.  
STRATIGRAPHIC SECTION  
SEC. 6-20S-29E  
Eddy Co., New Mexico  
Geology: M. L. Dusing  
5/15/89





SUPERIOR FEDERAL WELL NO. 6  
 660' FSL and 1980' FWL  
 Section 6, T20S, R29E  
 East Burton Flat Field  
 Eddy County, New Mexico



11-3/4" O.D. 42# CSG @ 350'  
 Cemented with 350 sacks Class C + 2% CaCl<sub>2</sub>  
 Cement circulated.

D.V. Tool @ 1789' in 8-5/8" CSG

8-5/8" O.D. 24# CSG @ 909'

8-5/8" O.D. 32# CSG @ 3105'

Cemented 1st Stage: 200 sacks HLW + 5# Gilsonite + 5# Salt. Tailed with 400 sacks Class C + 1/4# Flocele + 2% CaCl<sub>2</sub>.

2nd Stage: 950 sacks HLW + 5# Gilsonite + 5# Salt. Tailed with 150 sacks Class C + 1/4# Flocele + 2% CaCl<sub>2</sub>.

Cement did not circulate. Ran Cement Bond Log. Top of cement at 745'. Perforated and set retainer at 660', cemented with 500 sacks HLW + 5# Gilsonite + 5# Salt. Tailed with 300 sacks Class C + 4% CaCl<sub>2</sub>. Cmt circulated.

8-5/8" Centralizers @ 3090', 3065', 3025', 1829', 1749'

4-1/2" O.D. 13.5# CSG @ 11,600'

4-1/4" O.D. 11.6# CSG @ 10,434'

D.V. Tool in 4-1/4" CSG @ 8,995'

Cemented 1st Stage: 300 sacks HLW + 5% CFR-2 + 5# KCl. Tailed with 400 sacks Class H + 3/4% CFR-2 + 0.3% Halad-22 + 5# KCl.

2nd Stage: 575 sacks HLW + 5% CFR-2 + 5# KCl. Tailed with 500 sacks Class H + 5# KCl. Ran Cement Bond Log. Top of cement at 5560'. 4-1/2" Centralizers at 11,580', 11,520', 9,040' and 8,952'.

Baker Model DB  
 Production Packer

10,951'-956' (ATOKA) 2 SPF  
 11,006'-011' (MORROW) 2 SPF  
 11,118'-122' (MORROW) 2 SPF

1 SPF AS FOLLOWS: 11,177'; 11,180'; 11,186'; 11,191';  
 11,195'; 11,199'; 11,203'; 11,217'; 11,236'; 11,241';  
 11,247'; 11,251'; 11,267'; 11,270'; 11,276'; 11,281';  
 11,301'; 11,306'; 11,310'; 11,314'

4-1/2" O.D. 13.5# CSG. @ 11,600'

RPH/EAS

# Presidio Oil Company

3131 Turtle Creek Blvd. • Suite 400 • Dallas, Texas 75219-5415 • 214 528-5898 • Facsimile 214 528-2160

SUBSIDIARIES  
Peake Operating Company  
Presidio Energy, Inc.  
Presidio Exploration, Inc.  
The Desana Corporation  
The Petroleum Corp. of Delaware

## SUPERIOR FEDERAL WELL NO. 6 PRODUCTION ALLOCATION EAST BURTON FLAT ATOKA GAS

Prior to adding the perforations in May of 1987, the well was flow tested. The 33 days before the workover the Morrow perms from 11,177'-11,314' tested an average of 482 MCFGPD. On May 7, 1987 three sets of perforations were added from 11,118'-11,122'; 11,006'-11,011' + 10,951'-10,956'. The perforated interval from 10,951'-10,956' is designated by the State as an Atoka interval. A copy of the Compensated Neutron-Formation Density log with perforated intervals is attached. The following is a tabular presentation of log interpretation in each perforated interval.

Perforated Interval	Net Feet of Pay (ft)	Average Porosity (%)	Net Calc. Porosity-Feet	% Gas from Pay
10,951'-56'	6	6.2	0.372	41.15
11,006'-11'	8	3.5	0.280	30.97
11,118'-22'	6	4.2	0.252	<u>27.88</u>

100.00

The total gross increase in production from the workover on May 7, 1987 was 62 MCFGPD. Using a weighted average of net porosity feet of pay to determine the percentage of the increased gas volume that came from the Atoka pay shows that 41.15% of the 62 MCFGPD increase came from the 10,951'-56' Atoka interval. This is a total volume of 25.5 MCFGPD from Atoka pay. The total volume from both Atoka and Morrow pay after the workover was an average of 544 MCFGPD. Therefore, the percentage of Atoka gas from the total stream of combined production is  $25.5/544 = .0469$  or approximately 4.7% of total daily production. The allocation of Atoka gas production is based on these calculations. The allocations of produced reserves is 4.7% of total production after the May, 1987 workover and future production will be allocated in the same manner. Total produced Atoka reserves is 19,677 MCFG + 65 BO through July of 1989; 4.7% of all future tubing side production will be allocated to the East Burton Flat Atoka Gas Pool.

# *Presidio Oil Company*

---

3131 Turtle Creek Blvd. • Suite 400 • Dallas, Texas 75219-5415 • 214/528-5898 • Facsimile 214/528-2160

## SUBSIDIARIES

Peake Operating Company  
Presidio Energy, Inc.  
Presidio Exploration, Inc.  
The Desana Corporation  
The Petroleum Corp. of Delaware

## SUPERIOR FEDERAL NO. 6 WORKOVER DETAIL

A graph of the 33 days production prior to the May 7, 1987 perforating is attached. The tests averaged 482 MCFGPD with a 530 psi flowing tubing pressure.

On May 7, 1987 perforations were added via a 1-11/16" through tubing perforating gun. The intervals 10,951'-56'; 11,006'-11' and 11,118'-22' were perforated with 2 shots per foot with no fluid cushion. At this time there was no stimulation performed and the well was returned to production immediately.

The well was flow tested for 32 days and averaged 544 MCFGPD from all perforations old and new. This was a 62 MCFGPD increase in production.

On June 9th the entire Morrow/Atoka interval was acidized. This included both the old and new perforations. The acid job consisted of 4250 gallons of 7-1/2% MS acid pumped with 500 SCF/bbl nitrogen and 122 RCN ball sealers spaced evenly throughout the job.

The zones were production tested for 35 days after acidizing and the zones produced an average of 630 MCFGPD.

# Presidio Oil Company

---

3131 Turtle Creek Blvd. • Suite 400 • Dallas, Texas 75219-5415 • (214) 528-5898 • Facsimile: 214-528-2160

## SUBSIDIARIES

Peake Operating Company  
Presidio Energy, Inc.  
Presidio Exploration, Inc.  
The Desana Corporation  
The Petroleum Corp. of Delaware

## SUPERIOR FEDERAL NO. 6 GAS CHROMATOGRAPHIC TEST DATA

Obtained from El Paso Natural Gas Company's measurement department in El Paso, Texas. (Meter Station # 58-624-012)

### Normal Mole %

Sample Date	2/28/87	9/1/87	2/16/89
CO <sub>2</sub>	0.67	0.59	0.73
H <sub>2</sub> S	0.0	0.0	0.0
N <sub>2</sub>	0.40	0.56	0.38
Methane	91.01	91.29	91.01
Ethane	5.01	4.87	4.97
Propane	1.71	1.58	1.67
Iso-Butane	0.28	0.29	0.28
Norm-Butane	0.40	0.35	0.38
Iso-Pentane	0.15	0.15	0.15
Norm-Pentane	0.12	0.09	0.11
Hexane Plus	0.25	0.23	0.32
Specific Grav.	0.626	0.622	0.627
Specific Heats Ratio	1.296	1.296	1.296
BTU/CF	1102	1095	1103
Liquids (GPM)	2.236	2.131	2.236



# SUPERIOR FEDERAL #6 (MORROW)

SHUT-IN TUBING PRESSURE  
(psi)

ADDED PERFORATIONS IN MAY OF 1987.

ACIDIZED ALL MORROW PERCS IN JUNE OF 1987.

$\Delta P = 170$  PSI

SHUT IN PRESSURES  
OF AT LEAST 60 DAYS.

Semi-Logarithmic  
Cycles x 10 to the m

1985

1986

1987

1988

1989

MORROW

AVG RATE = 482 MCF/DAY  
FTP = 530 PSI  
33 DAYS BEFORE ADJUSTING PERFORATIONS.

AVG RATE = 544 MCF/DAY  
FTP = 560 PSI  
32 DAYS BEFORE ADJUSTING PERFORATIONS.

AVG RATE = 630 MCF/DAY  
FTP = 580 PSI  
35 DAYS BEFORE ADJUSTING PERFORATIONS.

ADDED PERFORATIONS

ADDED ALL PERFORATIONS (200 + NEW)

4-DAY MOVING AVERAGE OF ACTUAL MCF/DAY

Actual MCF/DAY

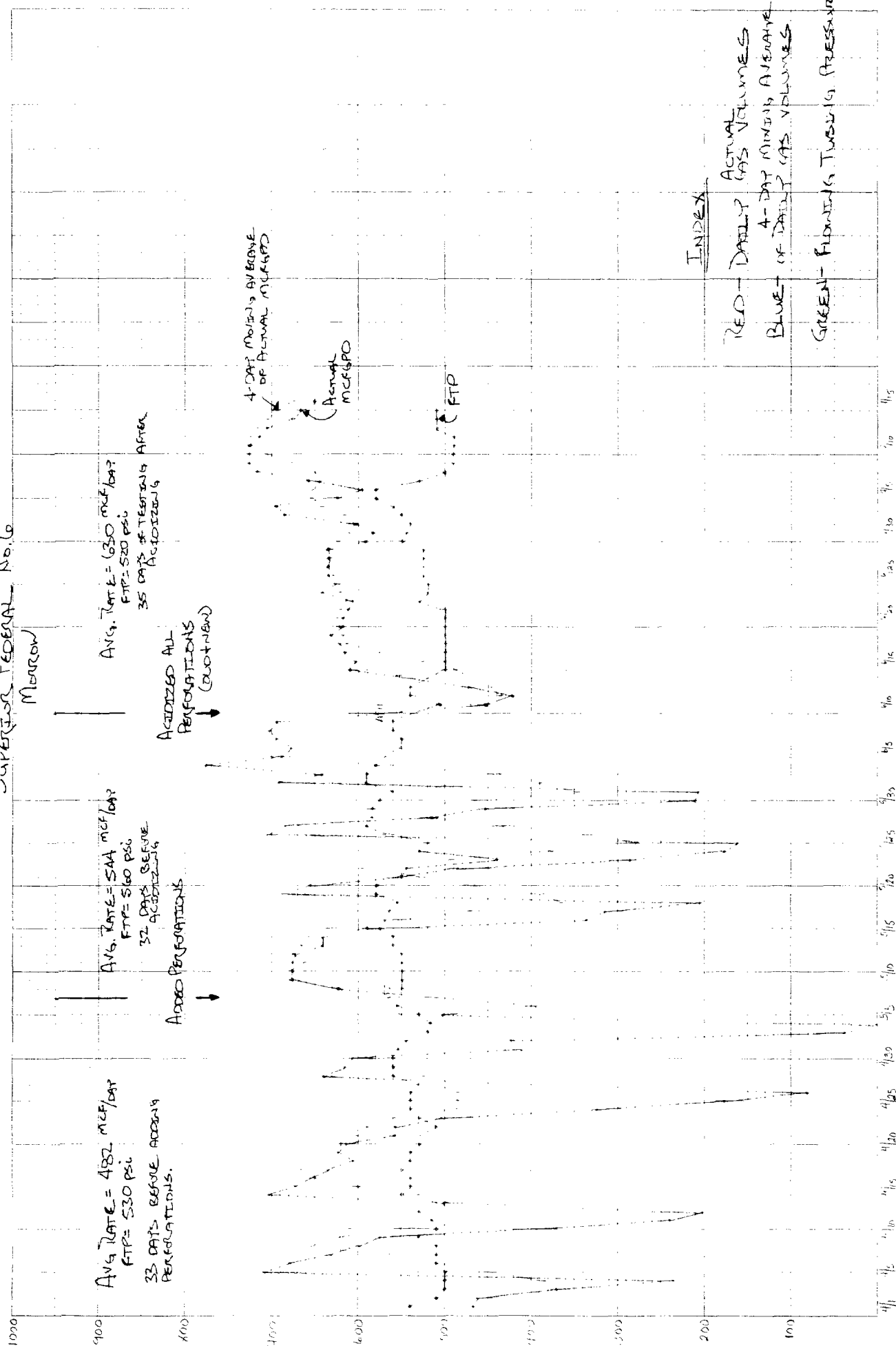
FTP

INDEX

RED - DAILY GAS VOLUMES

BLUE - 4-DAY MOVING AVERAGE OF DAILY GAS VOLUMES

GREEN - FLOWING TUBING PRESSURE



APPLICATION FOR MULTIPLE COMPLETION

Operator		County		Date
The Petroleum Corporation of Delaware		Eddy		August 14, 1989
Address		Lease		Well No.
3131 Turtle Creek Blvd., Ste. 400, Dallas, TX		75219-5415		
Location of Well	Unit	Section	Township	Range
	N	6	20S	29E

All Applicants for multiple completion must complete Items 1 and 2 below.

1. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation		East Burton Flat Atoka Gas Pool	East Burton Flat Morrow Gas Pool
b. Top and Bottom of Pay Section (Perforations)		10,951'-10,956'	11,006'-11,314'
c. Type of production (Oil or Gas)		Gas	Gas
d. Method of Production (Flowing or Artificial Lift)		(On compressor) Flowing	(On compressor) Flowing
e. Daily Production <input checked="" type="checkbox"/> Actual <input type="checkbox"/> Estimated Oil Bbls. Gas MCF Water Bbls.		25 MCFD	510 MCFD

2. The following must be attached:

- Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- Electrical log of the well or other acceptable log with tops and bottoms of producing zone and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

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

Signed James P. Anderson Title Operations Engineer Date August 14, 1989

(This space for State Use)

Approved By \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240  
DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210  
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department  
**OIL CONSERVATION DIVISION**  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

OPERATOR'S MONTHLY REPORT  
Form C-115 - Revised 1/1/89  
See Distribution and Code  
Information Bottom of Page

Company or Operator The Petroleum Corporation of Delaware

Address 3131 Turtle Creek, #400 Dallas, Texas

For Month, 07/89 Page 1 of 1  
Year

**POOL NAME (Underline)**

\*Lease Name  
WELL NO. UNIT SEC. TWP RNG

LEASE NAME - Include State Land Lease Number or Federal Lease Number

East Burton Flat (Atoka)  
Superior Federal  
NM-0144698  
#6 N-06-20S-29E

POOL NAME (Underline)															
*Lease Name															
WELL NO. UNIT SEC. TWP RING															
LEASE NAME - Include State Land Lease Number or Federal Lease Number															
INJECTION		PRODUCTION			DISPOSITION OF GAS			DISPOSITION OF OIL							
VOLUME	PRESS.	BARRELS OIL/COND. PRODUCED	BARRELS OF WATER PRODUCED	GAS PRODUCED (MCF)	DAYS PROD.	SOLD	TRANS- POR- TER	OTHER	C O D E	OIL ON HAND AT BEG. OF MONTH	BARRELS TO TRANS- POR- TER	TRANS- POR- TER	OTHER	C O D E	OIL ON HAND AT END OF MONTH
East Burton Flat (Atoka)															
Superior Federal															
NM-0144698															
#6 N-06-20S-29E															
F															
3															
0															
779															
30															
779															
EPNG															
0															
0															
KOCH															
3															
DISTRIBUTION															
Original OCD Santa Fe															
One Copy OCD Dist. Office															
in which lease is located															
One Copy to Transporter (s)															
DATE DUE															
To be postmarked by 24th day of next															
succeeding month.															
STATUS CODE		OTHER GAS DISPOSITION CODE				OTHER OIL DISPOSITION CODE				I HEREBY CERTIFY THAT THE INFORMATION GIVEN IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE					
F..... FLOWING	X..... USED OFF LEASE	C..... CIRCULATING OIL		OIL ON		Typed Name Operations Engineer Position 8/14/89									
P..... PUMPING	D..... USED FOR DRILLING	L..... LOST		HAND AT											
G..... GAS LIFT	Q..... GAS LIFT	S..... SEDIMENTATION (B.S. & W)		BEG. OF											
S..... SHUT IN	L..... LOST (MCF ESTIMATED)	E..... EXPLANATION ATTACHED		MONTH											
T..... TEMP ABANDONED	R..... REPRESSURING OR	T..... THEFT		BARRELS											
I..... INJECTION	P..... PRESSURE MAINTENANCE			TO											
D..... DISCONTINUED	V..... VENTED			TRANS-											
	U..... USED ON LEASE			POR-											
				TER											
				OTHER											
				C											
				O											
				D											
				E											
				OIL ON											
				HAND AT											
				BEG. OF											
				MONTH											
				BARRELS											
				TO											
				TRANS-											
				POR-											
				TER											
				OTHER											
				C											
				O											
				D											
				E											
				OIL ON											
				HAND AT											
				END OF											
				MONTH											

**DISTRIBUTION**

Original OCD Santa Fe  
One Copy OCD Dist. Office  
in which lease is located  
One Copy to Transporter (s)  
DATE DUE  
To be postmarked by 24th day of next  
succeeding month.

**STATUS CODE**

F..... FLOWING  
P..... PUMPING  
G..... GAS LIFT  
S..... SHUT IN  
T..... TEMP ABANDONED  
I..... INJECTION  
D..... DISCONTINUED

**OTHER GAS DISPOSITION CODE**

X..... USED OFF LEASE  
D..... USED FOR DRILLING  
G..... GAS LIFT  
L..... LOST (MCF ESTIMATED)  
E..... EXPLANATION ATTACHED  
R..... REPRESSURING OR  
V..... VENTED  
U..... USED ON LEASE

**OTHER OIL DISPOSITION CODE**

C..... CIRCULATING OIL  
L..... LOST  
S..... SEDIMENTATION (B.S.A.M)  
E..... EXPLANATION ATTACHED  
T..... THEFT

I HEREBY CERTIFY THAT THE INFORMATION GIVEN IS TRUE AND  
COMPLETE TO THE BEST OF MY KNOWLEDGE

Ronald P. Henderson (214) 528-5898

OPERATIONS ENGINEER POSITION PHONE NUMBER

Signature Date 8/14/89