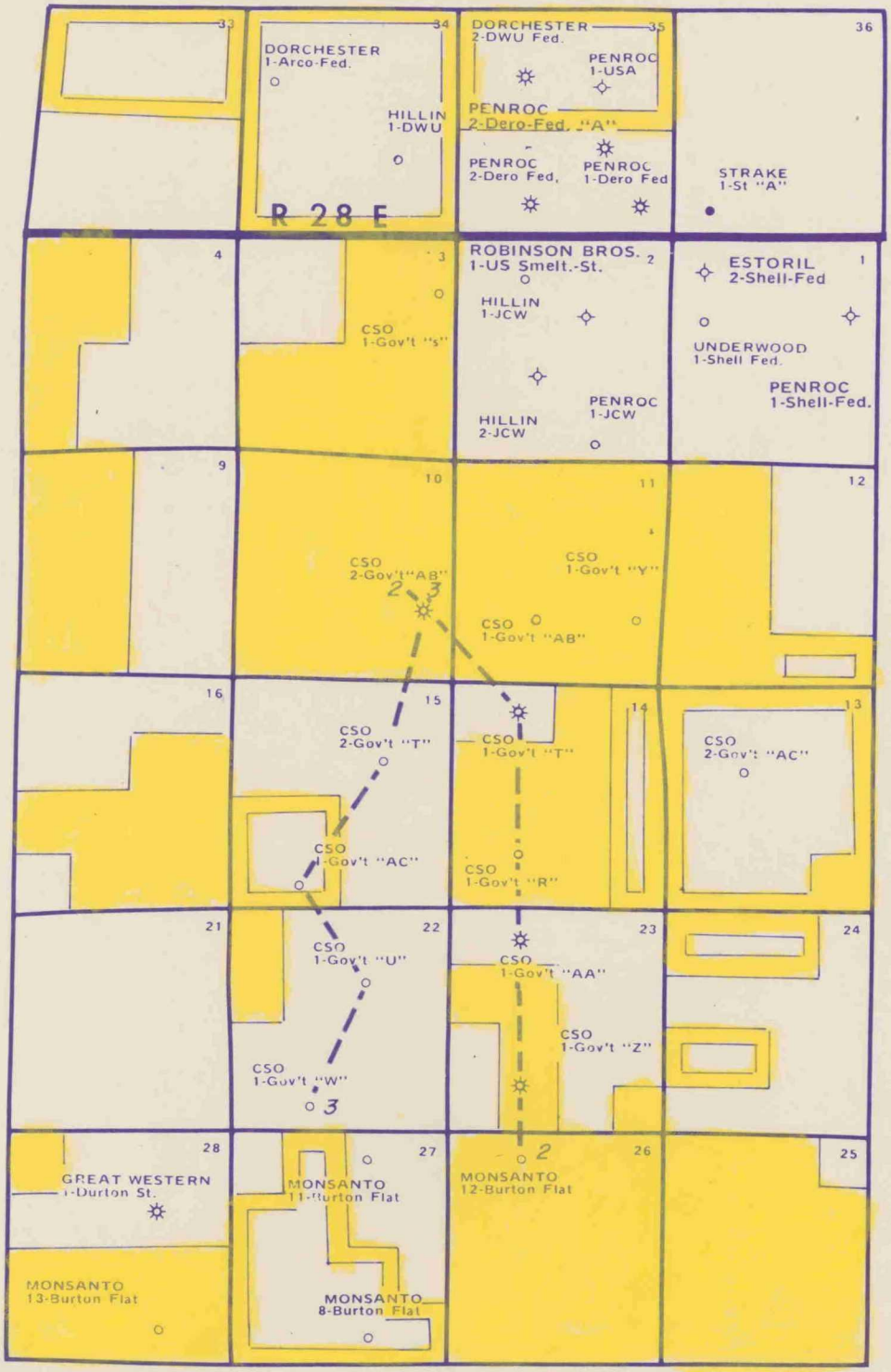


BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Cities EXHIBIT NO. 1
CASE NO. 5397
Submitted by Anderson
Hearing Date 4 Feb 76

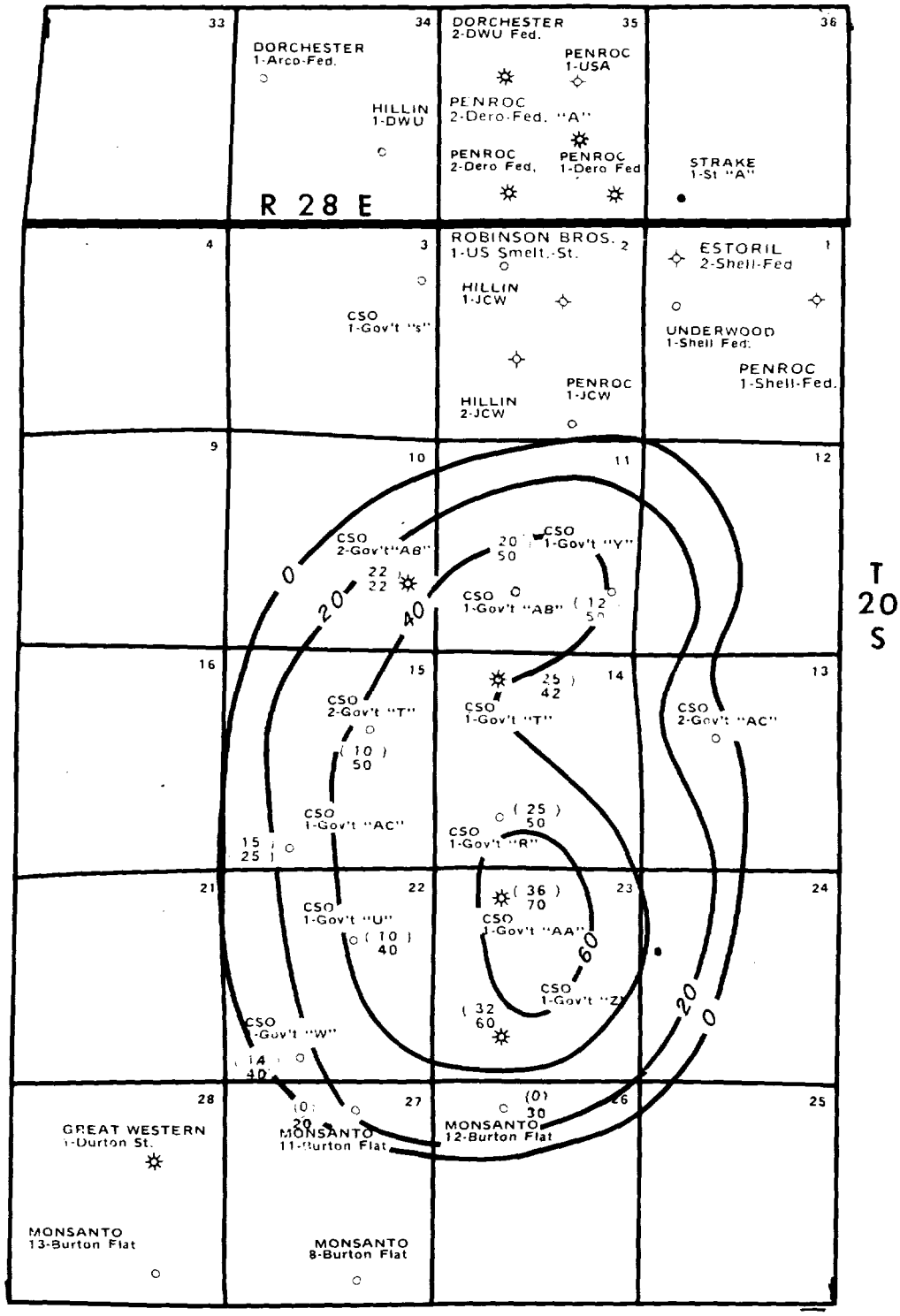
NORTH BURTON FLAT WOLFCAMP

LOCATION MAP

EXHIBIT 1

Geol. By: R. Andersen

SCALE:
1 MILE



NORTH BURTON FLAT WOLFCAMP

Gross Thickness of Lower Zone

Geol. By: R. Andersen

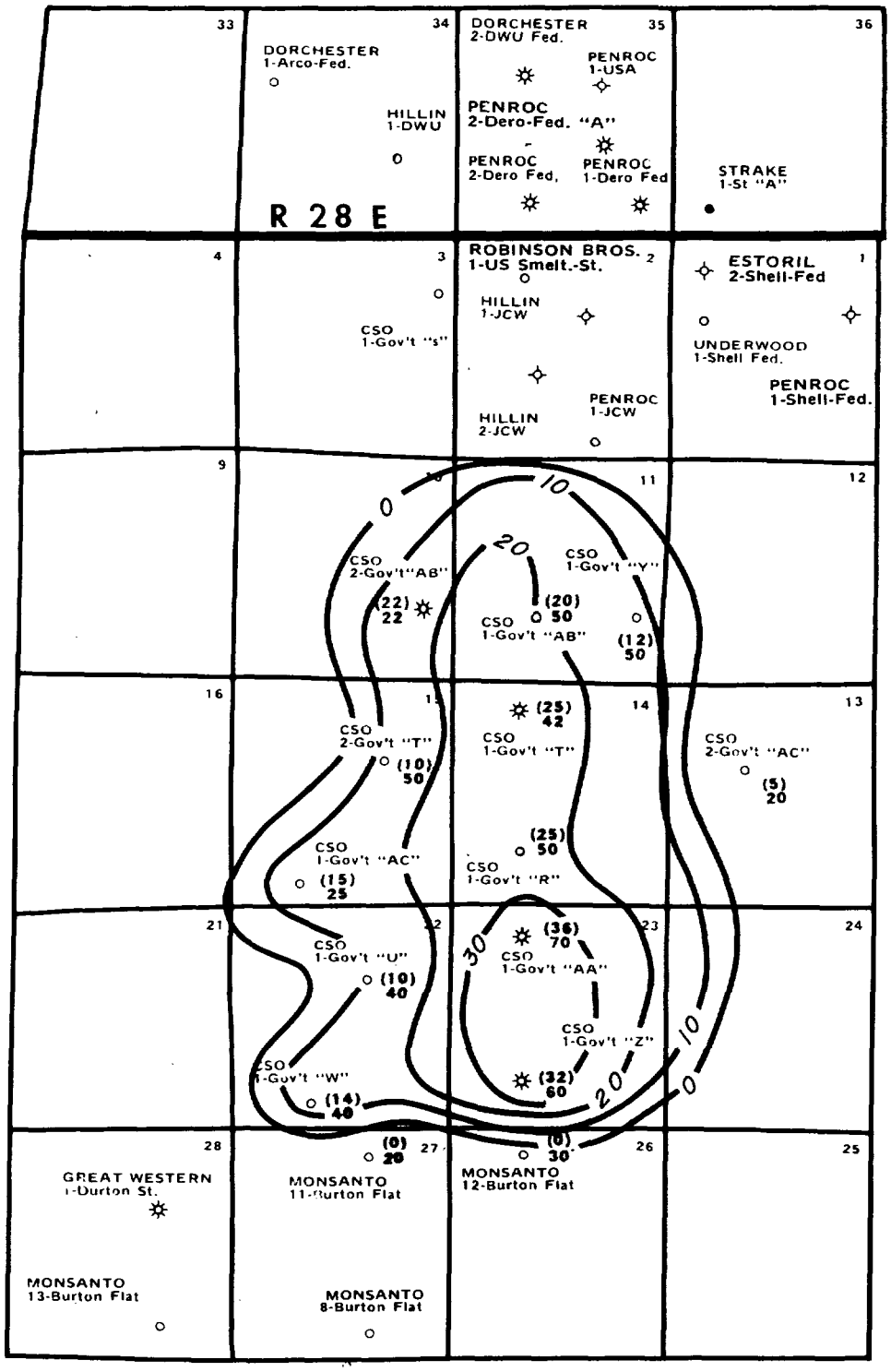
C.I. 20'

Example;
(32) Feet of Porosity
60 Gross Thickness

SCALE :

1 MILE

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 5397
Submitted by Anderson
Hearing Date 4 Feb 76



NORTH BURTON FLAT WOLFCAMP

POROSITY ISOPACH LOWER MOUND

Geol. By: R. Andersen

C.I. 10'

Example;

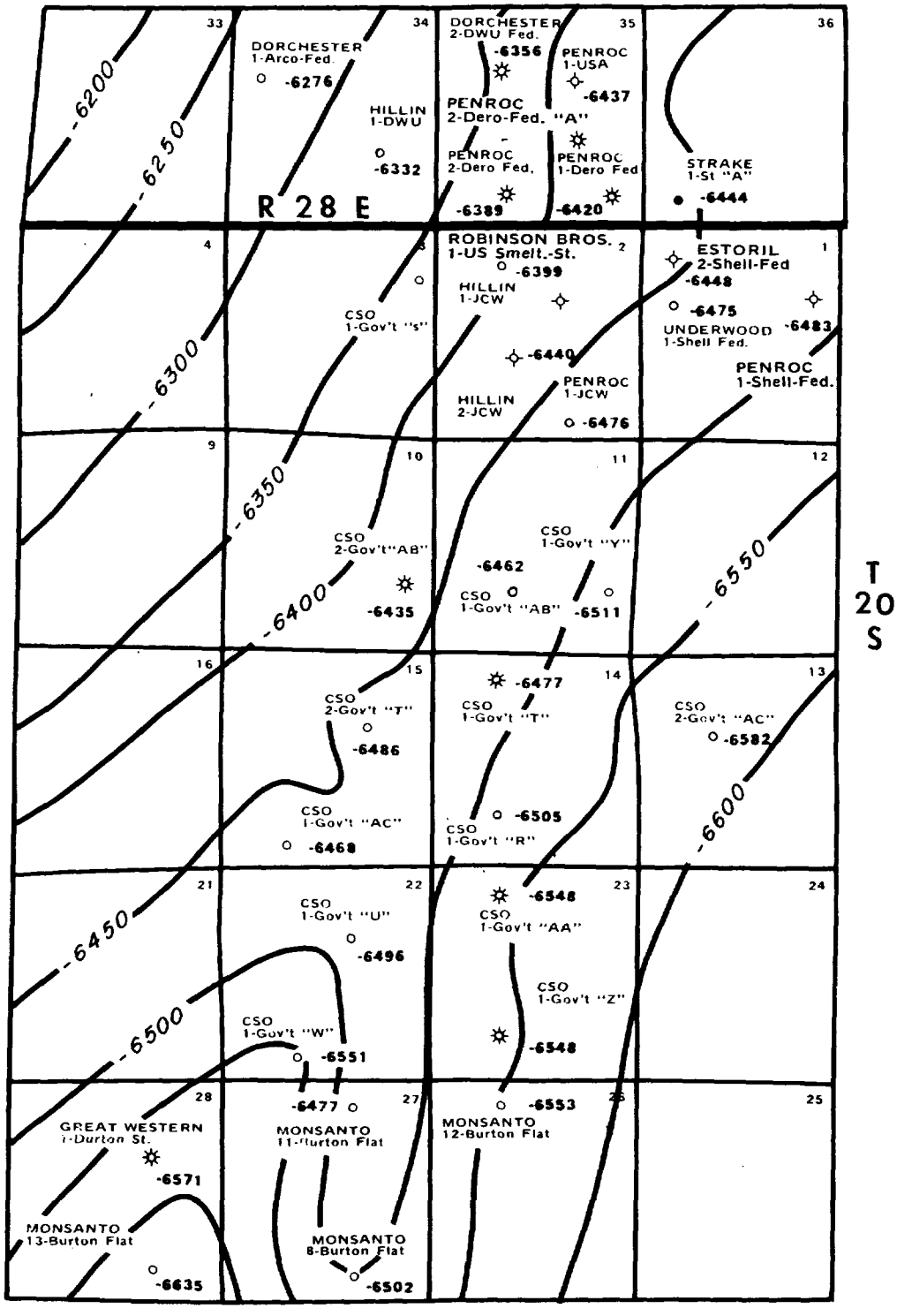
(32) Feet of Porosity

60 Gross Thickness

SCALE :

1 MILE

BEFORE EXAMINER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 5397
Submitted by Anderson
Hearing Date 4 Feb 76



NORTH BURTON FLAT WOLFCAMP

STRUCTURE MAP ON CANYON DATUM

Geol. By: R. Andersen

C.I. 50'

Example;
(32) Feet of Porosity
60 Gross Thickness

SCALE :
1 MILE

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Cities EXHIBIT NO. 6
CASE NO. 5397
Submitted by Anderson
Hearing Date 4 Feb 76

ILLEGIBLE

[illegible]ORTH BURTON FLA[illegible] [illegible]OLFCAMP MONTHLY PRODUCTION

		[illegible] T-[illegible]		GOVE[illegible]MENT		[illegible]ERNMENT AA		[illegible]VERNME[illegible]	
		CONDENSATE STB	[illegible] RATIO SCF/STB	CONDENSATE STB	[illegible] RATIO SCF/STB	CONDENSATE STB	G/L RATIO SCF/STB	CONDENSATE STB	[illegible] RATIO SCF/STB
[illegible]74	April	996	[illegible],391						
	[illegible]	[illegible]	3,9[illegible]						
	June	6,62[illegible]	3,8[illegible]						
	July	6,139	3,928						
	August	[illegible],868	3,981						
	September	-	-						
	October	-	-						
	November	900	4,093						
	December	4,149	4,606						
[illegible]	[illegible]uary	6,996	3,600	2,353	3,140				
	February	1,533	4,228	1,041	3,316	2,199	1,619		
	March	-	-	-	-	[illegible],297	1,089		
	[illegible]	[illegible],607	[illegible],27[illegible]	2,169	[illegible],683	5,117	2,37[illegible]		
	May	4,991	[illegible],498	2,432	2,982	6,404	2,883		
	June	5,952	4,002	2,324	3,037	6,793	2,683		
	July	4,939	4,502	2,378	3,376	5,955	3,136	[illegible],599	6,689
	August	5,160	[illegible]	[illegible],332	3,349	6,395	1,942	5,090	[illegible],313
	September	[illegible],730	4,066	[illegible]21	[illegible],3[illegible]	5,847	58[illegible]	4,827	[illegible],03
	[illegible]er	4,547	4,204	2,235	3,233	5,690	2,752	[illegible]4	6,936
	November	4,664	4,038	2,185	3,477	[illegible],370	2,989	4,533	6,702
	December	4,388	4,446	2,210	3,463	[illegible],237	2,998	4,862	6,391
Cumulative 1/1/76		84,036		25,259		60,304		28,765	
[illegible] 1/1/76		[illegible]98,[illegible]4							

BEFORE EXAMINER [illegible]
OIL CONSERVATION [illegible]
Cities EXHIBIT NO. 10
CASE NO. 5397
Submitted by Catron
Hearing Date 4 Feb 76

TABLE 6
RESERVOIR FLUID ANALYSIS
SAMPLE COMPOSITIONS

Company Cities Service Oil Company Date Sampled 6/24/75 Lab Report No.
Well Government AA Field Type of Sample Separator Report Date 9/16/75
County Eddy State New Mexico Country USA

	Field Separator Samples[a]		Reservoir Fluid[b] Samples at Saturation Conditions			
			Experimental[c]		Calculated	
Pressure (psig)						
Temperature (F)						
Gas-oil Ratio (cf[d]/bbl[e])	2900					
Specific Gravity (Air=1.0) Measured						
Specific Gravity (Air=1.00) Calculated		0.6879				
Method of Analysis	Bureau of Mines Distillation	Gas Chromatography				

Component	Liquid Mol %	Liquid Vol %	Gas Mol %	Gas GPM	Reservoir Fluid Samples at Saturation Conditions: Experimental Mol %	Experimental Vol % GPM	Calculated Mol %	Calculated Vol % GPM
Nitrogen	0		1.45				1.02	
Carbon Dioxide	0.09		0.20				0.17	
Hydrogen Sulfide	0		0				0	
Methane	17.36		80.48				61.80	
Ethane	11.56		2.12				11.95	
Propane	11.09		1.09				6.16	
Isobutane	2.25		.34				0.91	
n-Butane	6.74		1.08				2.59	
Isopentane	2.29		.14				0.78	
n-Pentane	3.46		0.14				1.12	
Hexanes	4.96		.19				1.60	
Heptanes								
Octanes								
Nonanes								
Heptanes and Heavier	40.20						11.90	
Total	100.00		100.00				100.00	

Density, Heptanes and Heavier gm/cc at F: 0.8056 — — — 0.8056
Molecular Wt., Heptanes and Heavier: — — — 170

[a] A page similar to this should be included for reporting the analysis of fluids from lower pressure stages of separation.
[b] For bubble-point oil or dew-point gas.
[c] Indicate type of sample; i.e., recombined or bottle hole.
[d] & [e] Conditions: pressure 14 psia, F.
Indicate whether separator oil or stock tank oil.
% for bubble-point, GPM for dew-point. Cross out inapplicable words.
Use name of appropriate component.

ILLEGIBLE

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Cities EXHIBIT NO. 11
CASE NO. 5397
Submitted by Cities
Hearing Date 4 Feb 76

TABLE 2
RESERVOIR FLUID ANALYSIS
SAMPLE COMPOSITIONS

Company Cities Service O | Date Sampled 6/24/74 | Lab Report No.
Well Government Z-1 | Field | Type of Sample Separator | Report Date 8/14/75
County Eddy | State New Mexico | Country USA

	Field Separator Samples[a]				Reservoir Fluid[b] Samples at Saturation Conditions			
					Experimental[c]		Calculated	
Pressure (psig)	620							
Temperature (F)	80							
Gas-oil Ratio (cf[d]/bbl[e])	3000							
Specific Gravity (Air=1.00) Measured								
Specific Gravity (Air=1.00) Calculated			0.6901					
Method of Analysis	Podbielniak Distillation		Gas-Liquid Chromatograph					
	Liquid		Gas					
Component	Mol %	Vol %	Mol %	GPM	Mol %	Vol %[f] GPM	Mol %	Vol %[f] GPM
Nitrogen	0		1.54	--			1.12	
Carbon Dioxide	0.07		0.18	--			0.15	
Hydrogen Sulfide	0		0	--			0	
Methane	15.24		80.16	--			62.45	
Ethane	11.82		10.23	3.45			12.12	
Propane	11.54		4.21	1.21			6.21	
Isobutane	2.28		34	0.12			0.87	
n-Butane	8.09		0.87	0.29			2.83	
Isopentane	2.78		0.14	0.0			0.86	
n-Pentane	3.63		0.14	0.05			1.09	
Hexanes	3.56		0.19	0.08			1.11	
Heptanes								
Octanes								
Nonanes								
Heptanes and Heavier[a]	41.03		0	0			11.19	
Total	100.00		100.00	5.20			100.00	
Density, Heptanes and Heavier[a] gm/cc @ 60 F	0.8055		--				0.8055	
Mol Wt., Heptanes and Heavier[a]	172		--				172	

[a] A range similar to this should be included for reporting the analysis of fluids from lower pressure stages of separation.
[b] For bubble point oil or dew-point gas.
[c] Indicate type of sample, i.e., recombined or bottom-hole: Recombined
[d] Base conditions pressure 14.7 psia, 60 F.
[e] Indicate whether separator oil ___, or stock tank oil X
[f] Vol % for bubble-point oil, GPM for dew-point gas. Cross out abbreviation which does not apply.
[g] Insert name of appropriate component.

ILLEGIBLE

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Cities EXHIBIT NO. 12
CASE NO. 5397
Submitted by Catron
Hearing Date 4 Feb 76

TABLE 2
RESERVOIR FLUID ANALYSIS
SAMPLE COMPOSITIONS

Company Cities Service O | Date Sampled 6/24/74 | Lab Report No.
Well Government Z-... | Field | Type of Sample Separator | Report Date 8/14/75
County Eddy | State New Mexico | Country USA

	Field Separator Samples[a]		Reservoir Fluid[b] Samples at Saturation Conditions			
			Experimental[c]		Calculated	
Pressure (psig)	620					
Temperature (F)	80					
Gas-oil Ratio (cf[d]/bbl[e])	3000					
Specific Gravity (Air=1.00) Measured						
Specific Gravity (Air=1.00) Calculated		0.6901				
Method of Analysis	Podbielniak Distillation	Gas-Liquid Chromatograph				

Component	Liquid Mol %	Liquid Vol %	Gas Mol %	Gas GPM	Mol %	Vol %[f] GPM	Mol %	Vol %[f] GPM
Nitrogen	0		1.54	--			1.12	
Carbon Dioxide	0.07		0.18	--			0.15	
Hydrogen Sulfide	0			--			0	
Methane	15.24		89.16	--			62.45	
Ethane	11.82		12.23	3.45			12.12	
Propane	11.54		4.21	1.2...			6.21	
Isobutane	2.28		3...	0.12			0.87	
n-Butane	8.09		0.87	0.2...			2.83	
Isopentane	2.78		0.14	0.0...			0.86	
n-Pentane	3.63		0.14	0.05			1.09	
Hexanes	3.56		0.19	0.0...			1.11	
Heptanes								
Octanes								
Nonanes								
Heptanes and Heavier[g]	41.03		0	0			11.19	
Total	100.00		100.00	5.20			100.00	

Density, Heptanes and Heavier, gm/cc @ 60 F | 0.8055 | -- | | 0.805[5]
Mol Wt. Heptanes and Heavier[g] | 172 | -- | | 172

[a] A gage similar to this should be included for reporting the analysis of fluids from lower pressure stages of separation.
[b] For bubble point oil or dew-point gas.
[c] Indicate type of sample, i.e., recombined or bottom-hole: Recombined
[d] Base conditions pressure 14.7 psia, 60 F.
[e] Indicate whether separator oil ___ or stock tank oil X
[f] Vol % for bubble-point oil, GPM for dew-point ... Cross out abbreviation which does not apply.
[g] Insert name of appropriate compone...

ILLEGIBLE

CITIES EXHIBIT NO. 12
CASE NO. 5397
Submitted by CATON
Hearing Date 4 Feb 76

TABLE 6T[illegible]
RESERVOIR FLUID [ANA]LYSIS
SAMPL[E] [CO]MPO[SITIO]NS

[illegible] [illegible]ies [illegible]ice Oil Company Date Sampled 6/24/75 Lab Report No.
[illegible] Governm[ent] [illegible] Field Type of Sample Separator Report Date [illegible]/16/75
[illegible] State New Mexico Country USA

	Field Separator Samples[a]			Reservoir Fluid[b] Samples at Saturation Conditions: Experimental[c]		Calculated[d]	
Pressure [illegible]							
Temperature [illegible]							
Gas [illegible] Ratio ([illegible]/bbl[e])	1500						
Specific Gravity (Air = 1.00) Measured							
Specific Gravity (Air = 1.00) Calculated		[illegible]899					
[illegible] of Analysis	Podbielniak Distillation	[illegible]matogr[aphy]					
Component	Mol %	Mol %	GPM	[illegible]	Vol %[f] GPM	[illegible] %	[illegible] GPM
[illegible]	0					[illegible].05	
[illegible] Dioxide	0.05	[illegible]				[illegible]17	
[illegible]	[illegible]	[illegible]				[illegible]	
[illegible]	17.29					[illegible]76	
[illegible]	1[illegible].95	[illegible]				[illegible]4	
[illegible]	8.[illegible]3					[illegible].20	
[illegible]ane	2.1[illegible]					[illegible].77	
[illegible]	7.[illegible]					[illegible].46	
[illegible]Pentane	[illegible]	[illegible]				[illegible]	
[illegible]	[illegible].53	0.[illegible]				[illegible].45	
[illegible]	[illegible].29	3[illegible]					
[illegible]							
[illegible]							
[illegible]							
[illegible] and heavier	[illegible]3.17	0				64	
	[illegible]0.[illegible]	100.00				100.[illegible]	

[illegible] Heptanes
[illegible] heavier, gm/cc at [illegible] 0.7910 0.7910
Heptanes and heavier [illegible] 1[illegible] 1[illegible]

[illegible] this sh[ould] be includ[ed] [in] repor[t] [illegible] analysis [of liq]uids from [lo]wer pressure stages of [separ]ation [illegible] oil or [illegible]nt gas
[illegible] sample; recomb[ined] [illegible]
[illegible] pressure 70 psi[illegible]
[illegible] separat[illegible] X
[illegible] point o[illegible] M for dew [illegible] abbr[eviati]on which does not apply.
[illegible] appropr[iate] component.

ILLEGIBLE

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Cities EXHIBIT NO. 13
CASE NO. 5397
Submitted by [illegible]
Hearing Date 4 Feb 76

EXHIBIT ___

SLE 4

RECOMBINED RESERVOIR FLUID BEHAVIOR AT 152°F

(RESERVOIR TEMPERATURE) GOR = 4500

GOVERNMENT T-1

EDDY COUNTY, NEW MEXICO

Pressure, psig	Volume Percent Liquid
4670 (Dew Point Pressure)	--
4650	0.8
4560	3.8
4470	22.1
4340	24.4
4220	26.8
4025	29.9
3780	31.7
3570	33.8
3370	34.0
3170	32.8
2910	31.0
2670	29.1
2320	25.2
1880	20.1
1440	16.2
1240	11.6
1030	9.1
860	7.3
730	5.9
670	5.3

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Garies EXHIBIT NO. 14
CASE NO. 5397
Submitted by Catron
Hearing Date 4 Feb 76

EXHIBIT ___

GOVERNMENT T-1

Constant Composition Expansion at 152°
Recombined Fluids at 4500 GLR

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 15
CASE NO. 5397
Submitted by CATON
Hearing Date 4 Feb 76

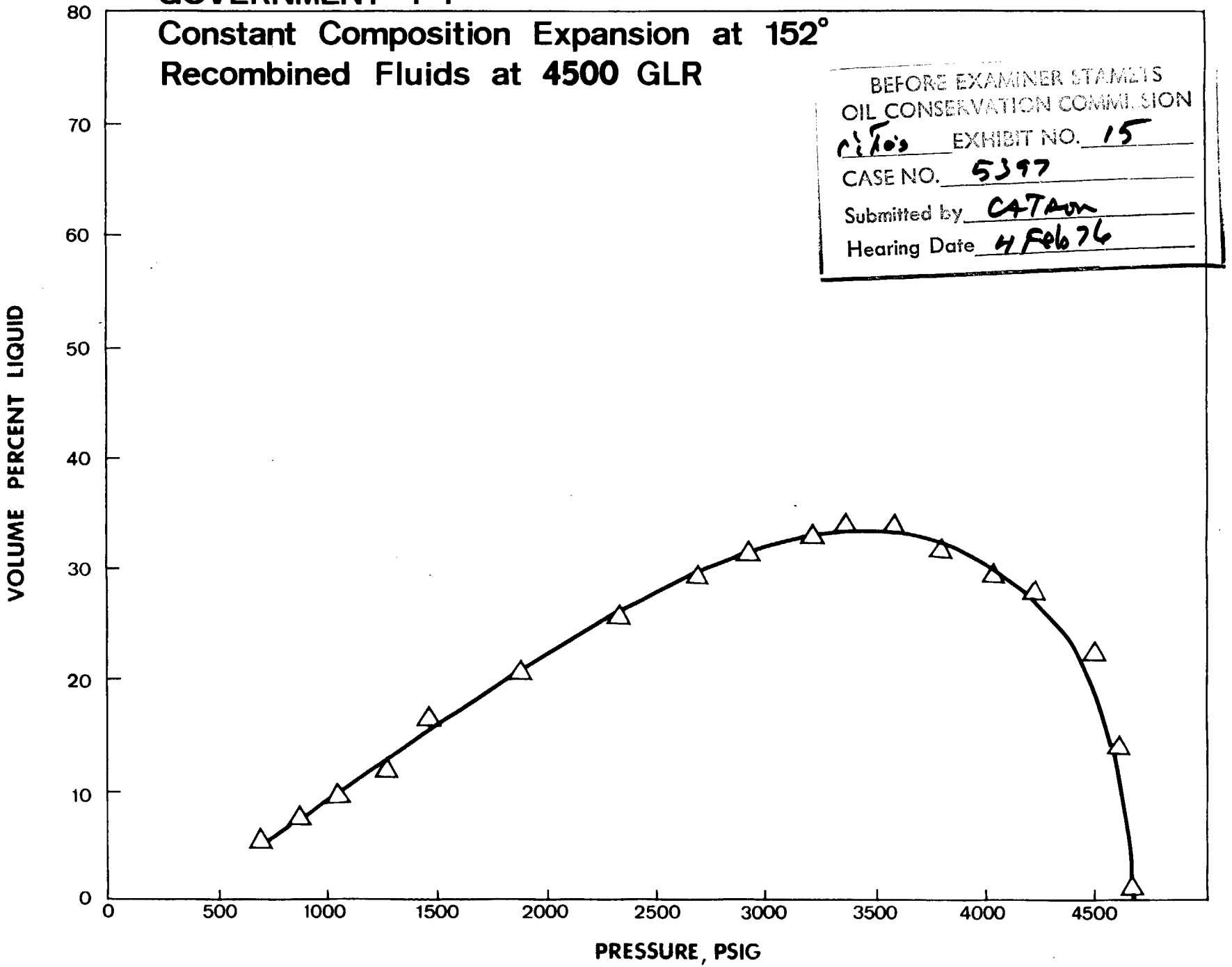


EXHIBIT _

ILLEGIBLE

TABLE 7

ANALYSIS OF GASES REMOVED FROM WINDOWED CELL

CONSTANT VOLUME DEPLETION DATA, 152°F

(4670-1000 psig)

RECOMBINED RESERVOIR FLUIDS, GOR = 450[illegible]

GOVERNMENT T-1, EDDY COUNTY, NEW MEXICO

Component	Gas Removed @ [illegible]370 psig Mole %	GPM[1]	Gas Removed @ 4070 psig Mole %	GPM	Gas Removed @ 3770 psig Mole %	GPM	Gas Removed @ 3470 psig		Gas Removed @ [illegible]70 psig Mole %	GPM	Gas Rem[illegible] @ 287[illegible] Mole %	GPM	Gas Removed @ 2570 psig Mole %	GPM	Gas Removed @ [illegible]70 psig Mole %	GPM	Gas Removed @ 1970 psig Mole %	GPM	Gas Rem[illegible] [illegible]70 [illegible] Mole %	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
N_2	0.75	--	1.34	--	1.37	-	no analysis		1.54	--	1.54	--	1.62	--	1.57	--	2.02	[illegible]	[illegible]39	--	1.39	-	[illegible]	
CO_2	0.17	--	0.46	--	0.22	--			0.10	--	0.10	--	0.10	--	1.54	--	0.10	--	0.1[illegible]	-	0.14	--	0.[illegible]	
[illegible]	53.84	--	68.47	-	69.99	--			73.[illegible]	--	74.30	--	75.9		75.[illegible]	-	[illegible]		72.1[illegible]		77.39		[illegible]	
[illegible]	15.83	4.46	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]				[illegible]							
[illegible]	9.64	2.80	11.08	3.21	5.99	1.74			5.38	[illegible]	[illegible]	1.54	[illegible]	1.49	4.85	1.41	4.49	1.30	5.[illegible]	1.58	4.[illegible]	[illegible]30	[illegible]	
[illegible]-C_4	1.56	0.54	0.65	0.22	[illegible]	0.27			0.79	0.27	0.70	[illegible]24	0.64	0.22	0.58	0.20	1.63	0.56	0.70	0.24	0.[illegible]	0.18	0.5[illegible]	
[illegible]	3.49	1.16	[illegible]07	0.36	[illegible].26	75			1.94	0.64	1.[illegible]	0.65	1.73	0.57	1.65	0.55	4.03	1.34	1.89	0.63	1.40	[illegible]		
	1.25	0.48	[illegible]	[illegible]	[illegible]76	30			0.29	0.11	0.5	[illegible]		[illegible]	0.37	0.14	[illegible]25	0.10	[illegible]	0.1[illegible]	[illegible]	[illegible]		
	[illegible]	0.6[illegible]		[illegible]	0.69	.26			0.3[illegible]		[illegible]	[illegible]			0.43	[illegible]6	3[illegible]	0.1[illegible]	0.[illegible]	0.2[illegible]				
	1.08	0.47	0.32	0.14	0.39	0.17			0.30	0.1[illegible]	[illegible]		[illegible]	0.13	0.27	0.[illegible]	0.35	0.15	0.55	0.24	0.34	[illegible]		
[illegible]	10.79	6.68	3.67	2.27	4.84	3.04			3.44	2.15	2.12	[illegible].1[illegible]	1.27	0.75	1.71	1.04	2.66	1.58	4.49	[illegible]	[illegible]	[illegible]39		
[illegible] Mole. Wt	135		135		137				136		120		128		132		126		128		[illegible]			
[illegible]	0.900		0.845		0.81[illegible]				0.[illegible]70		0.760		[illegible]768		[illegible]		[illegible]							
Specific Gravity	3253		0.9085		1.017				0.[illegible]404		[illegible]5876		[illegible]		[illegible]		[illegible]		[illegible]		[illegible].874		[illegible]	
BTU/cu ft	2192		1562		1615				148[illegible]		[illegible]		[illegible]		[illegible]33		1461		[illegible]27[illegible]		[illegible]359		[illegible]	
MCF Gas Removed per Reservoir bbl	35.7		38.45		22.84				45.[illegible]		41.80		51.4[illegible]		88.52		63.48		56.63		119.34		120.[illegible]	

1 GPM, gallons of liquid per MSCF gas
2 [illegible] compressibility [illegible]

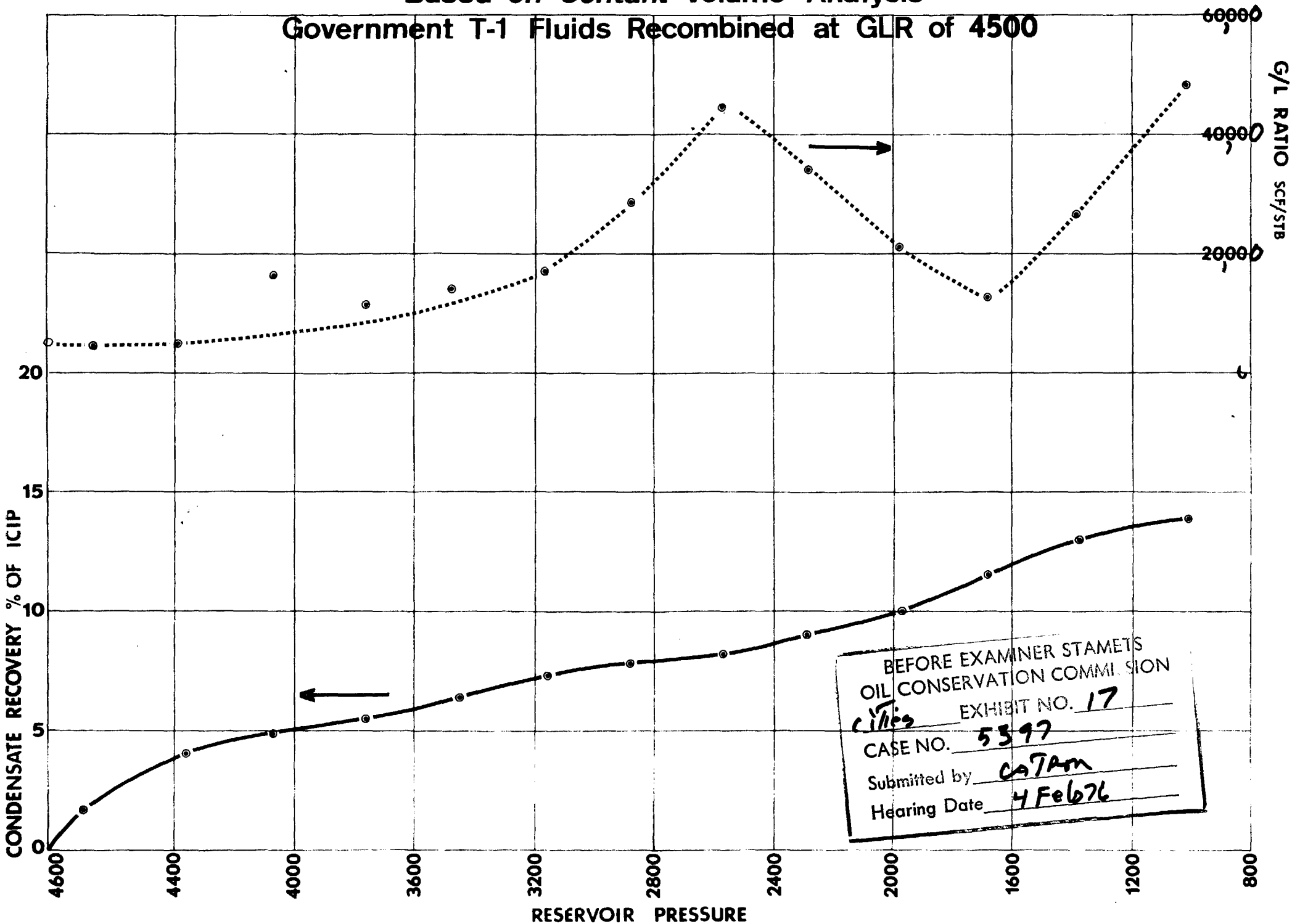
API° of C7+	50.97	50.[illegible]	50.31		50.64	56.60	53.4[illegible]	52.0	53.43	53.43	53.06	53.43
Calculated GOR	460[illegible]	16287	11417		17054	28267	4482[illegible]	34255	21163	13058	27103	48453

EXHIBIT __

NORTH BURTON FLAT WOLFCAMP PERFORMANCE

Based on Contant Volume Analysis

Government T-1 Fluids Recombined at GLR of 4500



BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 17
CASE NO. 5597
Submitted by Conoco
Hearing Date 4 Feb 76

(WEST PARKWAY-STRAWN GAS AND
WEST PARKWAY-ATOKA GAS POOLS - Cont'd.)

EDDY COUNTY, NEW MEXICO
TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 28: N/2

(3) That, effective October 1, 1973, Special Rules and Regulations for the West Parkway-Strawn Gas Pool and the West Parkway-Atoka Gas Pool, Eddy County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
WEST PARKWAY-STRAWN GAS POOL AND
WEST PARKWAY-ATOKA GAS POOL

RULE 1. Each well completed or recompleted in the West Parkway-Strawn Gas Pool and/or West Parkway-Atoka Gas Pool or in the Strawn and Atoka formations within one mile thereof, and not nearer to or within the limits of another designated Strawn or Atoka pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2 (a) Each gas well shall be located on a standard unit containing 320 acres, more or less, comprising any two contiguous quarter sections of a single governmental section, being a legal subdivision of the United States Public Land Surveys.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The non-standard unit lies wholly within a standard proration unit for the well under the applicable provisions of Rule 2 above and contains less acreage than a standard unit.

(c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the standard proration unit for the well in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than 660 feet to the nearest side boundary of the tract nor nearer than 1980 feet to the nearest end boundary of the tract.

RULE 5. A gas well in the West Parkway-Strawn Gas Pool shall be permitted to produce no more than 1500 MCF of gas per day during the effective period of these pool rules and a gas well in the West Parkway-Atoka Gas Pool shall be permitted to produce no more than 2000 MCF of gas per day during the effective period of the rules.

RULE 6. The operator of each newly completed well shall cause a gas-liquid ratio test to be taken on the well upon recovery of all load oil from the well. Any well which is shut in shall be exempted from the gas-liquid ratio test requirement so long as it remains shut in. The initial gas-liquid ratio test shall be taken in the manner prescribed by Rule 7.

RULE 7. Gas-liquid ratio tests shall be taken on all wells during the months of March and September of each year. The initial gas-liquid ratio test shall suffice as the first semi-annual test. Tests shall be 24-hour tests, being the final 24 hours of a 72-hour period during which the well shall be produced at a constant normal rate of production. Results of such tests shall be filed on Commission Form C-116 on or before the 10th day of the following month. At least 72 hours prior to commencement of any such gas-liquid ratio tests, each operator shall file with the appropriate district office of the Commission a test schedule for its wells specifying the time each of its wells is to be tested. Copies of the test schedule shall also be furnished to all offset operators. The Commission District Supervisor may grant exceptions to the above test requirements where it is demonstrated that wells produce no liquids.

Special tests shall also be taken at the request of the Secretary-Director and may also be taken at the option of the operator. Such special tests shall be taken in accordance with the procedures outlined hereinabove, including notification to the Commission and offset operators.

RULE 8. An initial shut-in pressure test shall be taken on each gas well and shall be reported to the Commission on Form C-125.

RULE 9. Any well completed after the effective date of these rules shall receive an allowable only upon receipt by the appropriate Commission district office of Commission Forms C-104 and C-116, properly executed. The District Supervisor of the Commission's district office is hereby authorized to assign a temporary gas allowable to wells connected to a gas transportation facility during the recovery of load oil, which allowable shall not exceed the amounts set forth in Rule 5 of these rules.

RULE 10. The initial balancing date shall be 7 o'clock a.m. April the first, 1974. Subsequently, the date 7:00 a.m. April the first of each year shall be known as the balancing date, and the twelve months following this date shall be known as the gas proration period.

RULE 11. Any gas well which has an underproduced status as of the end of a gas proration period shall be allowed to carry such underproduction forward into the next gas proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any allowable carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be cancelled.

RULE 12. Production during any one month of a gas proration period in excess of the allowable assigned to a well for such month shall be applied against the underproduction carried into such period in determining the amount of allowable, if any, to be cancelled.

WEST PARKWAY-STRAWN GAS AND
WEST PARKWAY-ATOKA GAS POOLS - Cont'd.)

RULE 13. Any well which has an overproduced status as of ıe end of a gas proration period shall carry such overproduction ɔrward into the next gas proration period, provided that such ver production shall be compensated for during such succeeding eriod. Any well which has not compensated for the overproduction carried into a gas proration period by the end of such roration period shall be shut in until such overproduction is ompensated for. If, at any time, a well is overproduced an mount equalling three times its current monthly allowable, it hall be shut in during that month and each succeeding month ntil the well is overproduced less than three times its current nonthly allowable.

RULE 14. The allowable assigned to a well during any one nonth of a gas proration period in excess of the production for he same month shall be applied against the overproduction arried into such period in determining the amount of overroduction, if any, which has not been compensated for.

RULE 15. The Commission may allow overproduction to be ɔmpensated for at a lesser rate than would be the case if he well were completely shut in upon a showing after notice ınd hearing that complete shut in of the well would result in naterial damage to the well or reservoir.

RULE 16. The monthly gas production from each gas well ihall be metered separately and the gas production therefrom ihall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 24th day of the month next succeeding the month in which the gas was produced. The ɔperator shall show on such report what disposition has been nade of the produced gas.

RULE 17. Each purchaser or taker of gas shall submit a reɔrt to the Commission so as to reach the Commission on or ɔefore the 15th day of the month next suceeding the month in which the gas was purchased or taken. Such report shall be filed on Form C-111 with the wells being listed in the same ɔrder as they are listed on the appropriate proration schedule.

RULE 18. Failure to comply with any provision of these rules shall result in the immediate cancellation of allowable assigned to the affected well. No further allowable shall be assigned until all rules and regulations have been complied with. The Secretary-Director shall notify the operator of the well and purchaser in writing of the date of allowable cancellation and the reason therefor.

RULE 19. All transporters or users of gas shall file gas well-connection notices with the Commission as soon as possible after the date of connection.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the West Parkway-Strawn Gas Pool or the West Parkway-Atoka Gas Pool or in the Strawn or Atoka formations within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the appropriate district office of the Commission in writing of the name and location of the well on or before November 1, 1973.

(2) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the West Parkway-Strawn Gas Pool and West Parkway-Atoka Gas Pool shall have dedicated thereto 320 acres, in accordance with the foregoing pool rules or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have nonstandard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 320 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable.

(3) That this cause shall be reopened at an examiner hearing during October, 1974, to permit the operators in said pools to appear and present evidence to clearly establish the nature of said reservoirs, proper rates of production for wells therein, and special rules therefor.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

SOUTH DAGGER DRAW-
UPPER PENNSYLVANIAN ASSOCIATED POOL
Eddy County, New Mexico

Order No. R-4637, Creating and Adopting Temporary Operating Rules for the South Dagger Draw-Upper Pennsylvanian Associated Pool, Eddy County, New Mexico, October 1, 1973.

Application of Roger C. Hanks for Creation of a Pool and Special Rules Therefor, Eddy County, New Mexico.

CASE NO. 5048
Order No. R-4637

ORDER OF THE COMMISSION

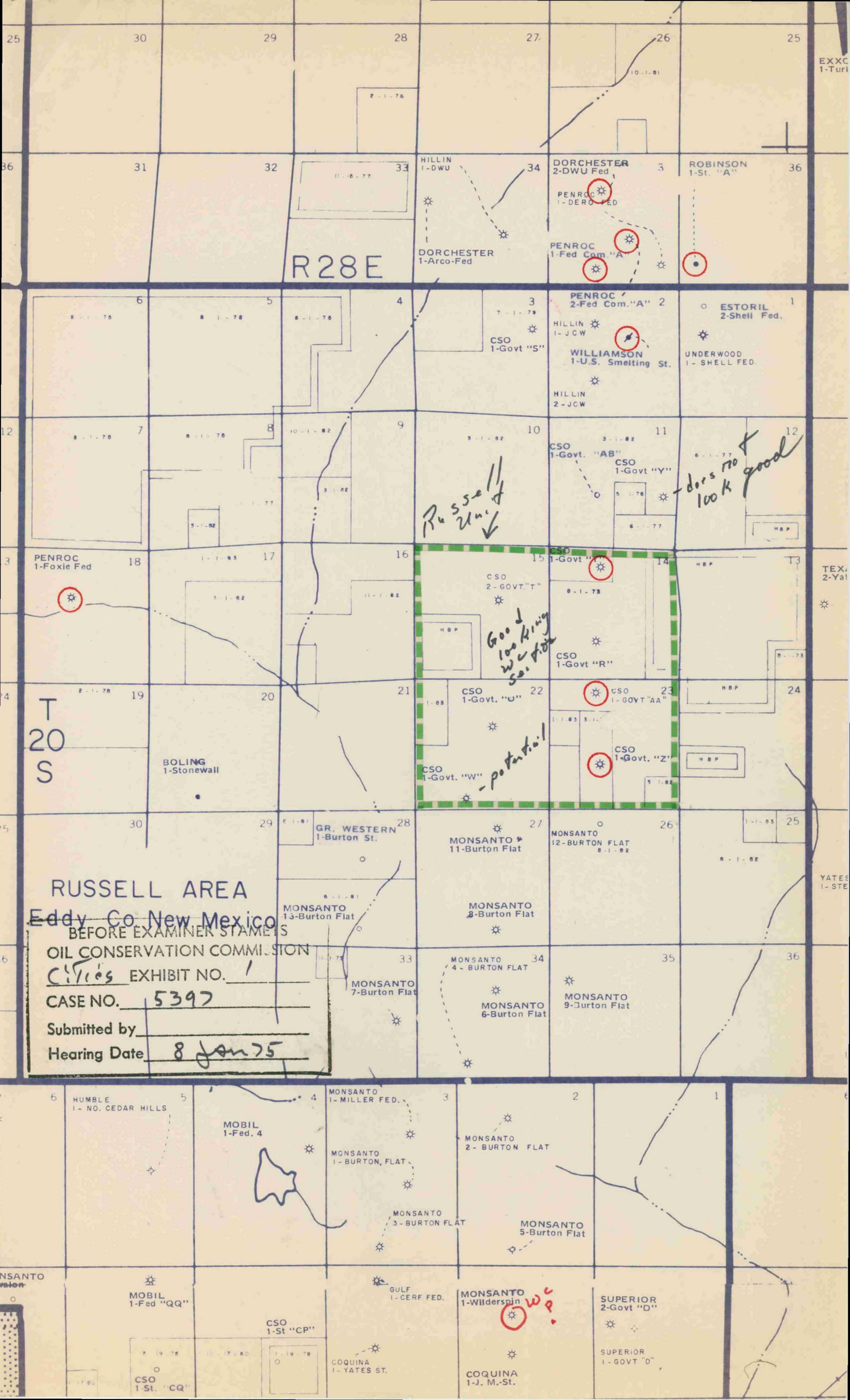
BY THE COMMISSION: This cause came on for hearing at 9 a.m. on August 22, 1973, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 26th day of September, 1973, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

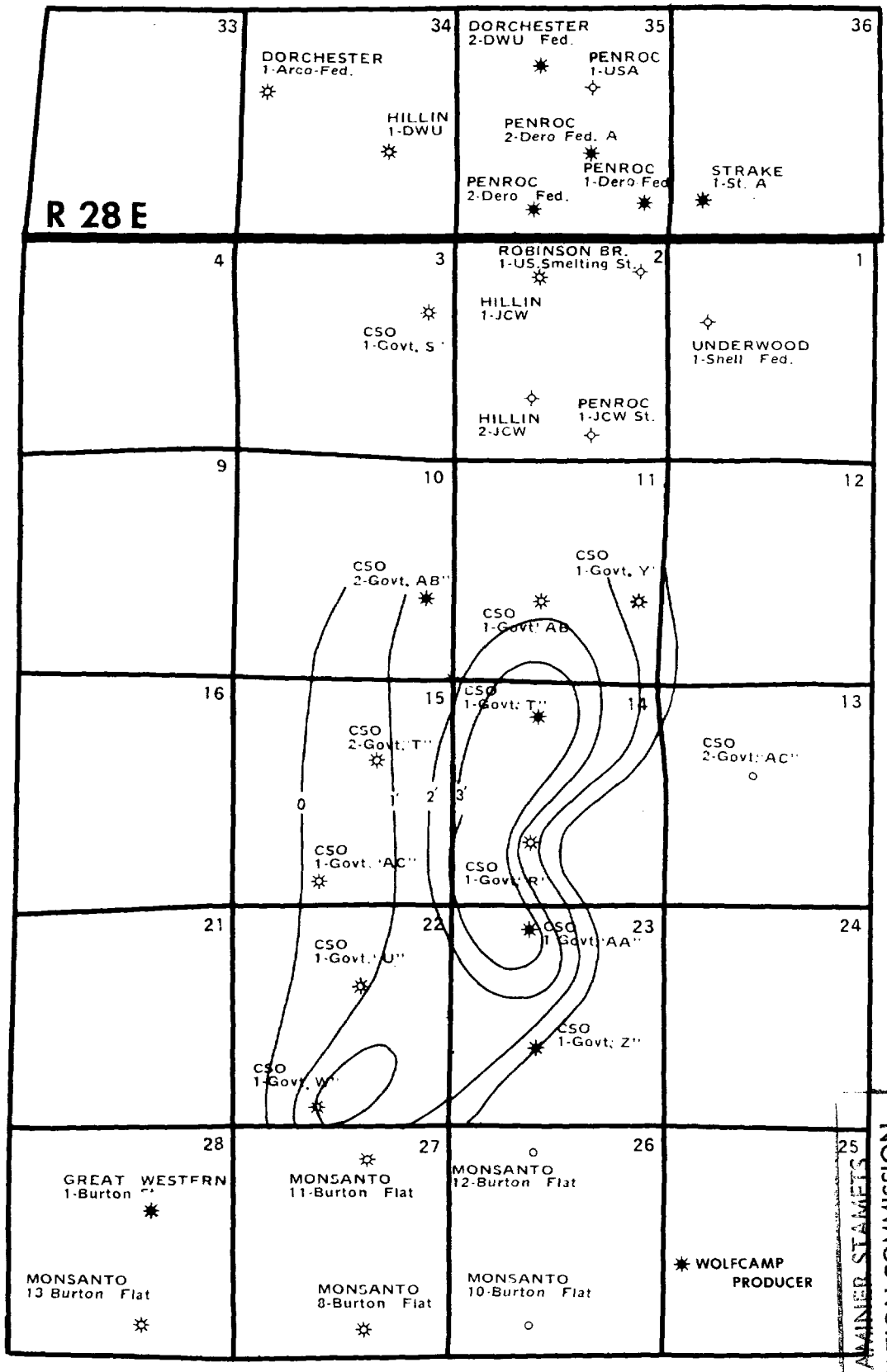
(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Roger C. Hanks, seeks the promulgation of special rules and regulations for the South Dagger Draw-Upper Pennsylvanian Pool, Eddy County, New Mexico, including a provision for classification of oil wells and gas wells, 320-acre spacing for all wells, a limiting gas-oil ratio of 8000 to one, and for the assignment of a special depth bracket allowable for oil wells of 267 barrels of oil per day.



RUSSELL AREA
Eddy Co New Mexico

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Cities EXHIBIT NO. 1
CASE NO. 5397
Submitted by
Hearing Date 8 Jan 75



NORTH BURTON FLAT WOLFCAMP
NET PERMEABLE ISOPACH

EXHIBIT __

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7
CASE NO. 5397
Submitted by CATAnn
Hearing Date 4 Feb 26

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 5397
Submitted by
Hearing Date 8 Jan 75

RUSSELL UNIT WOLFCAMP PRODUCTION CITIES

1974

GOVERNMENT T-1

	MSCFD	BCPD	GOR	FTP
May	1005	253	3972	-
June	846	221	3828	-
July	778	198	3929	-
August	753	189	3984	-
September	S.I.			
December 21	1900	339	5605	1700
" 22	1635	374	4372	1700
" 23	1483	354	4189	1350
" 24	1830	420	4357	1025
" 25	1633	391	4176	1000
" 26	1534	435	3526	900
" 27	1400	390	3590	870
" 28	1235	266	4643	950
" 29	1222	317	3855	950
" 30	1200	240	5000	950
" 31	1200	266	4511	950
January 1	1200	240	5000	900
" 2	1040	348	2986	930
" 3	1126	270	4170	950

Cumulative gas - 133,223 MSCF
Cumulative cond.- 33,950 STB

GOVERNMENT Z-1

	MSCFD	BCPD	GOR	FTP
December 21	352	143	2462	700
" 22	350	98	3571	690
" 23	350	82	4268	690
" 24	-	85	-	750
" 25	338	-	-	800
" 26	338	74	4568	810
" 27	330	80	4125	825
" 28	340	128	2656	1000
" 29	370	72	5139	925
" 30	265	78	3397	1010
" 31	315	77	4091	875
January 1	325	72	4514	875
" 2	265	71	3732	900
" 3	265	56	4732	1000

Cumulative gas - 4,116 MSCF
Cumulative cond.- 1,162 STB

TABLE 1

RESERVOIR AND SAMPLING DATA

Well Name	Government Z#1
County, State	Eddy County, New Mexico
Perforated Interval	9219-9303
Formation	Wolfcamp
Well Completion Date	9-24-74
Sampling Date	11-21-74
Sampling Depth	8814 feet
Sampling Temperature	152°F
Sampling Pressure	4635 psig
Perforated Interval Pressure	4825 psig

TABLE 2
RESERVOIR FLUID ANALYSIS
SAMPLE COMPOSITIONS

Company Cities Service Oil Date Sampled 11-21-74 Lab Report No.
Well Government Z#1 Field -- Type of Sample Bottom-hole Report Date 12-11-74
County Eddy State New Mexico Country USA

	Field Separator Samples[a]				Reservoir Fluid[b] Samples at Saturation Conditions			
					Experimental[c]		Calculated	
Pressure (psig)					4635			
Temperature (F)					153°F			
Gas-oil Ratio (cf[d]/bbl[e])								
Specific Gravity (Air=1.00) Measured								
Specific Gravity (Air=1.00) Calculated								
Method of Analysis					Podbielniak Distillation			
	Liquid		Gas					
Component	Mol %	Vol %	Mol %	GPM	Mol %	GPM	Mol %	Vol %[f] GPM
Nitrogen					0.77	--		
Carbon Dioxide					0.02	--		
Hydrogen Sulfide					0	0		
Methane					64.10	--		
Ethane					11.51	3.24		
Propane					6.21	1.80		
iso-Butane					0.82	0.28		
n-Butane					2.67	0.89		
iso-Pentane					0.92	0.35		
n-Pentane					1.13	0.43		
Hexanes					1.59	0.69		
Heptanes Octanes Nonanes Heptanes and Heavier[g]					10.26	7.24		
Total					100.00	14.92		
Density, Heptanes and Heavier, gm/cc at 60 F					0.8076			
Mol Wt., Heptanes and Heavier[g]					162.3			

52° Gravity

[a] A page similar to this should be included for reporting the analysis of fluids from lower pressure stages of separation.
[b] For bubble-point oil or dew-point gas.
[c] Indicate type of sample; i. e., recombined or bottom-hole: bottom-hole
[d] Base conditions: pressure ____ psia, 60 F.
[e] Indicate whether separator oil ____, or stock-tank oil ____
[f] Vol % for bubble-point oil, GPM for dew-point gas. Cross out abbreviation which does not apply.
[g] Enter name of appropriate component.

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Cities EXHIBIT NO. 4
CASE NO. 5397
Submitted by
Hearing Date 8 Jan 75

TABLE 4

RESERVOIR FLUID BEHAVIOR AT 152°F (RESERVOIR TEMPERATURE)

GOVERNMENT Z#1

EDDY COUNTY, NEW MEXICO

Pressure	Volume Percent Liquid	Bbl Separated Oil Per MMSCF Separated Gas
4690 (Dew Point Pressure)	--	--
4680	7.4	57.3
4620	22.5	214.4
4540	26.4	271.5
4480	28.9	344.9
4350	31.3	361.7
4160	34.0	427.9
3960	34.7	464.2
3700	35.1	504.5
3480	35.2	535.1
3220	34.4	555.0
3000	33.8	575.0
2790	32.3	573.2
2570	30.5	567.7
2280	27.9	559.2
2010	24.1	513.6
1730	20.5	475.4
1470	16.5	424.4
1210	12.9	383.9
960	9.7	343.5
740	7.1	314.2
620	5.7	293.8

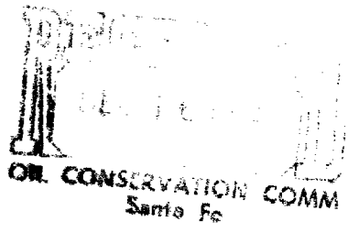
BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Cities EXHIBIT NO. 5
CASE NO. 5397
Submitted by
Hearing Date 8 Jan 75

Case 5397

BEFORE THE

OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF CITIES SERVICE OIL COMPANY FOR THE CREATION OF A POOL AND POOL RULES FOR PRODUCTION FROM THE WOLFCAMP FORMATION, EDDY COUNTY, NEW MEXICO



A P P L I C A T I O N

COMES NOW Cities Service Oil Company, by and through its attorneys, KELLAHIN & FOX, and applies to the New Mexico Oil Conservation Commission for the designation of a new pool for production from the Wolfcamp formation and for pool rules therefor, and in support thereof would show the Commission:

1. Applicant is the operator of Wolfcamp production wells located in Eddy County, New Mexico as follows:

(a) Government AA #1 Well, located 1980' from the North line and 1980' from the West line of Section 23, T20S, R28E; WC tested 11/9

(b) Government T #1 Well, located 660' from the North line and 1980' from the West line of Section 14, T20S, R28E; WC tested 3/4

(c) Government Z #1 Well, located 660' from the South line and 1980' from the West line of Section 23, T20S, R28E. WC tested 9/24

2. Applicant seeks the creation of a new pool for production by subject wells from the Wolfcamp formation.

3. Applicant further seeks the promulgation of pool rules for said pool, including provisions for the location of wells, the size of proration and spacing units, and

DOCKET MAILED
Date 12-26-74

Case 5397

such other rules as the Commission deems appropriate.

WHEREFORE, Applicant respectfully requests that this application be set for hearing before the Commission's duly appointed Examiner and that upon hearing, an order be entered granting the Application as requested.

Respectfully submitted,

CITIES SERVICE OIL COMPANY

BY _____

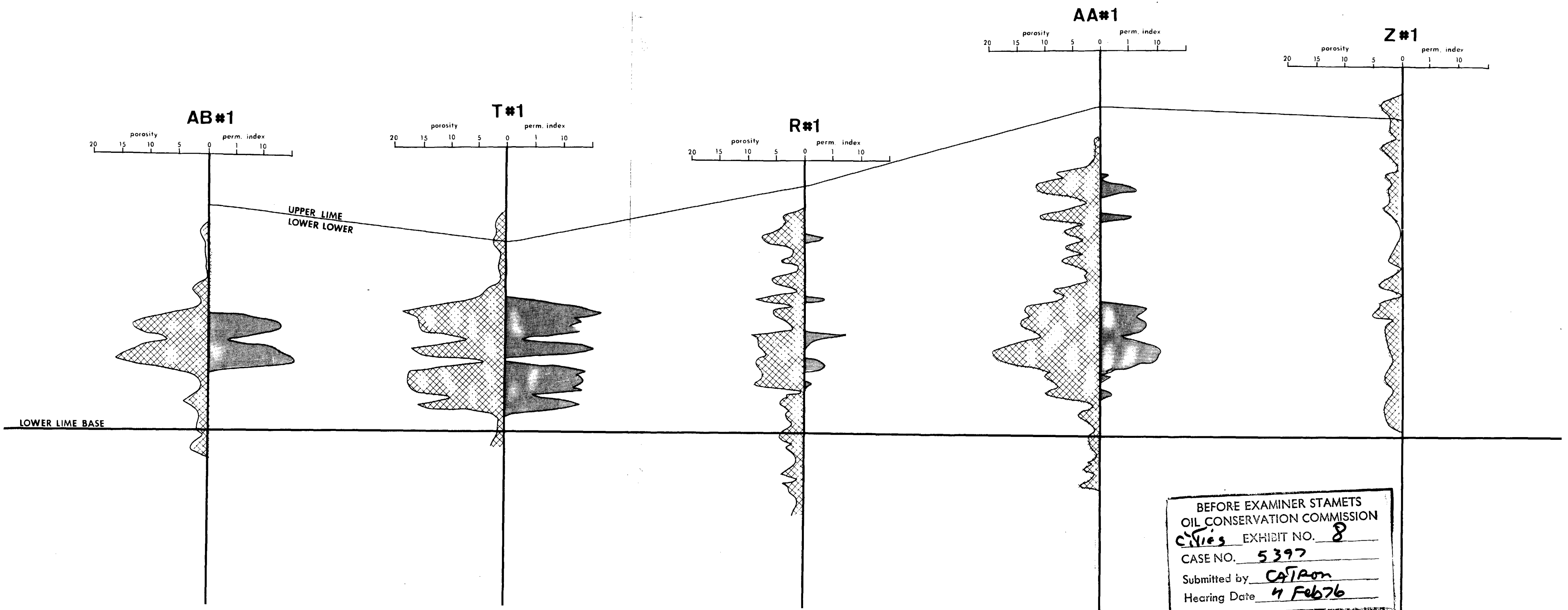
KELLAHIN & FOX
P. O. Box 1769
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

EXHIBIT ___

N-S CROSS SECTION (1)

CORIBAND LOGS



BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
CITIES EXHIBIT NO. 8
CASE NO. 5397
Submitted by CITIES
Hearing Date 4 Feb 76