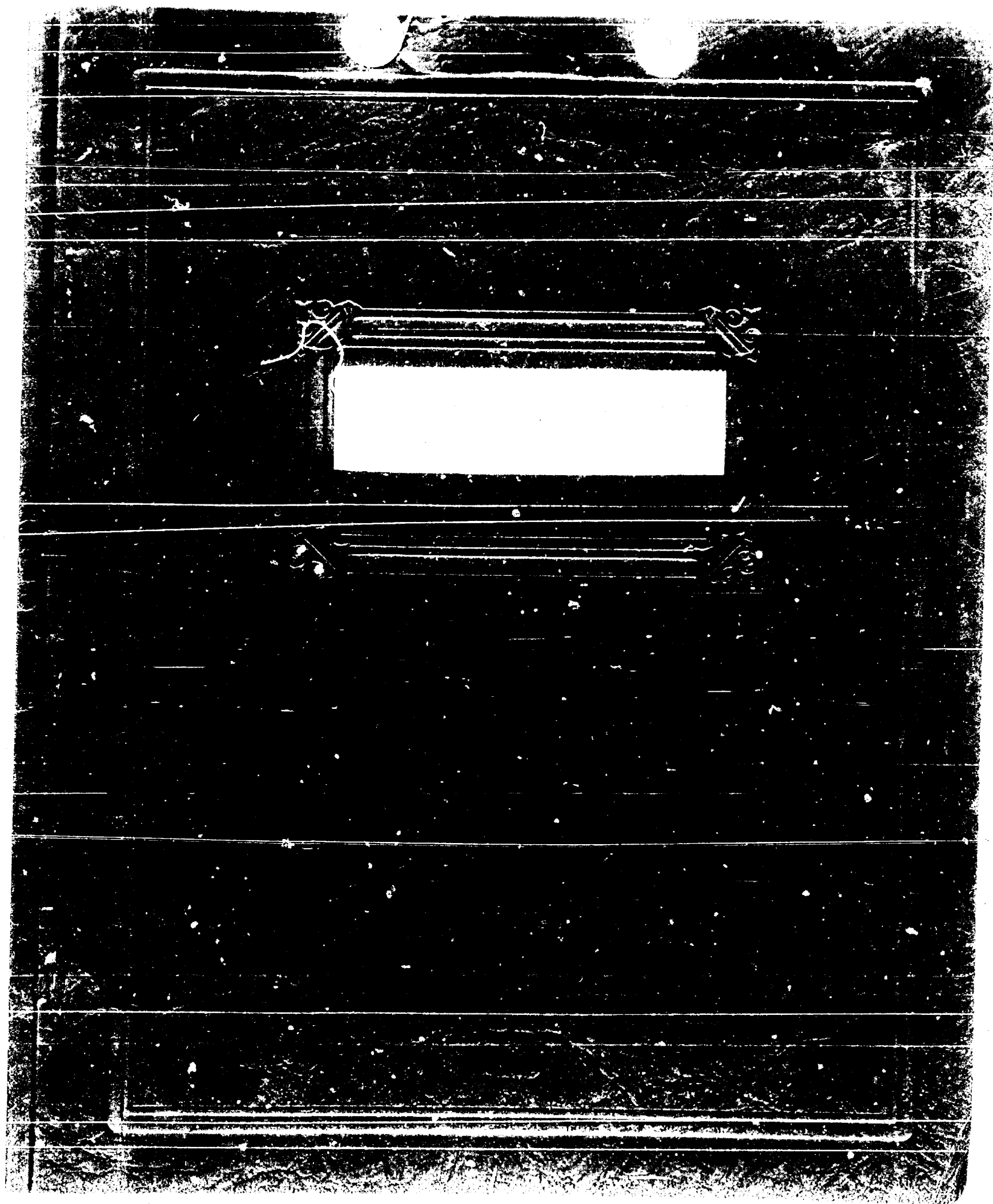


Case No.

21

Application, Transcript,
Small Exhibits, Etc.



Hobbs, New Mexico
August 7, 1940

Oil Conservation Commission
Santa Fe, New Mexico

Gentlemen:

I, James M. Murray, operate one gas well on the Edith Fanning lease Section 33, Township 23 South, Range 37 East, Skelly Field, New Mexico. It is generally understood that this well is a dry gas well producing from a gas horizon above what is commonly recognized as oil sand pay. As far as I have been able to determine this gas horizon has produced no oil in the immediate area. However, this same horizon has been penetrated to a lesser degree in nearly every surrounding well.

Therefore, because this well produces dry gas only and the horizon from which it is producing has tested only gas in every well drilled through it, I ask that this well be classified as a gas well and not fall under the provisions of any gas-oil ratio conservation order that the Oil Conservation Commission might write.

Respectfully submitted,

JAMES M. MURRAY

BY: T.B. Suddreth
T.B. Suddreth

A REPORT ON MURRAY FANNING NO. 1 GAS WELL
WITH REQUEST FOR CLASSIFICATION AS A GAS
WELL NOT SUBJECT TO GAS-OIL RATIO ORDER

PURPOSE OF THE REPORT

The purpose of this report is to show the conditions of structure, producing sands penetrated, and permeability of sands producing oil and gas, or gas only in the southern part of the Skelly Area and more particularly in Section 33, Township 23 South, Range 37 East at what is known as the Murray Fanning No. 1 gas well.

An East-West cross-section is submitted and attached hereto which shows the relation as to the gas, oil and gas, producing horizon.

GEOLOGY

The area surrounding the Fanning gas well consists of flanking sands that are lenticular in form. These sands grade in porosity from a fairly clean porous permian sand to a very impervious anhydritic condition as they approach the top of the structure. This gradation into impervious anhydrite forms the seal necessary for the accumulation of gas or oil and gas along the sides of, rather than over the crest of, the structural high. The structural high in this area trends Northwest-Southeast and its crest appears to be one and a half to two miles northeast of the Fanning gas well.

Due to the lenticular condition of the sand it is possible and drilling has proven that offset wells can produce from two or three entirely different and segregated sand bodies. By examining the enclosed cross-section it can be seen that the Great Western Producers Leonard B No. 1 well, the west offset to the Fanning gas well, is producing its oil from a sand that is over 150 feet lower in geological section than the gas sand of the Fanning No. 1. In the Great Western Leonard B 1 the upper sand section or Fanning gas sand was almost entirely sealed off

page 2

with a deposition of anhydrite. The first good showing of gas in this well was found in the second sand which tested 15 million cubic feet per day. Oil in commercial quantities was not encountered in this well until the third sand had been drilled. This well was shot with nitroglycerine from the bottom of the second sand to the well's total depth and after shot tested 60 barrels of oil per day. At the present time this well has an allowable of 16 barrels per day. This well showed no oil and very little gas in the first or so-called Fanning gas sand.

The Great Western Producers Leonard No. 3 a northwest offset to their Leonard No. 1 is producing from the second sandy pays as indicated on the cross-section. This well tested after being shot with nitroglycerine, 112 barrels of oil per day and 2 million cubic feet of gas. After completion a gas packer was set between the first or Fanning gas pay and the second or oil pay section. This packer reduced the gas-oil ratio from 51,336 to 3,500 cubic feet per barrel showing that the greatest volume of gas was originating in the first or Fanning gas sand.

To the southeast of the Fanning gas well the Western Gas Company's Davis No. 1 was drilled through the first and second sand horizons with no oil and very little gas and completed in the third sand horizon as a 30 barrel per day oil well. At present this well is producing 28 barrels per day using purchased gas to lift the oil in a gas-lift system.

The Murray Fanning No. 1 gas well was drilled to the first gas sand where it blew out testing 60 million cubic feet per day. This well was drilled with cable tools and it was found that the volume of the gas combined with the gas pressure, made it impossible to drill through this gas sand to any lower sands. It seems that this well is so situated geologically as to receive the greatest thickness of sand in the first

page 3

or gas sand horizon and with the greatest porosity as shown by both the initial and recent gas volume tests, as compared to surrounding wells. This well has never shown any oil and at present tests 66 million feet of gas per day. Also to date some 760 million cubic feet of gas has been produced.

CONCLUSION

Therefore, it is shown by the enclosed cross-sectional diagram and by the detailed descriptions of the surrounding wells that this first sandy horizon being the horizon from which the Murray Fanning No. 1 gas well is producing is a dry gas sand and a dry gas sand only, as far as can be determined by an examination of all the wells in the area. It is my conclusion that this well and the adjacent territory should be classified as being in a gas area when producing from this first gas sand, because withdrawal of gas from this sand in this area is not depleting reservoir energy from any known oil producing horizon, or wells in the vicinity.

Therefore, as this well is a dry gas well and not depleting oil or energy from producing oil wells, it should be ~~excepted~~ excepted from any gas-oil ratio conservation order that the Oil Conservation Commission may issue. This well has no other source of revenue than the sale of dry gas for commercial and domestic uses.

Respectfully submitted,

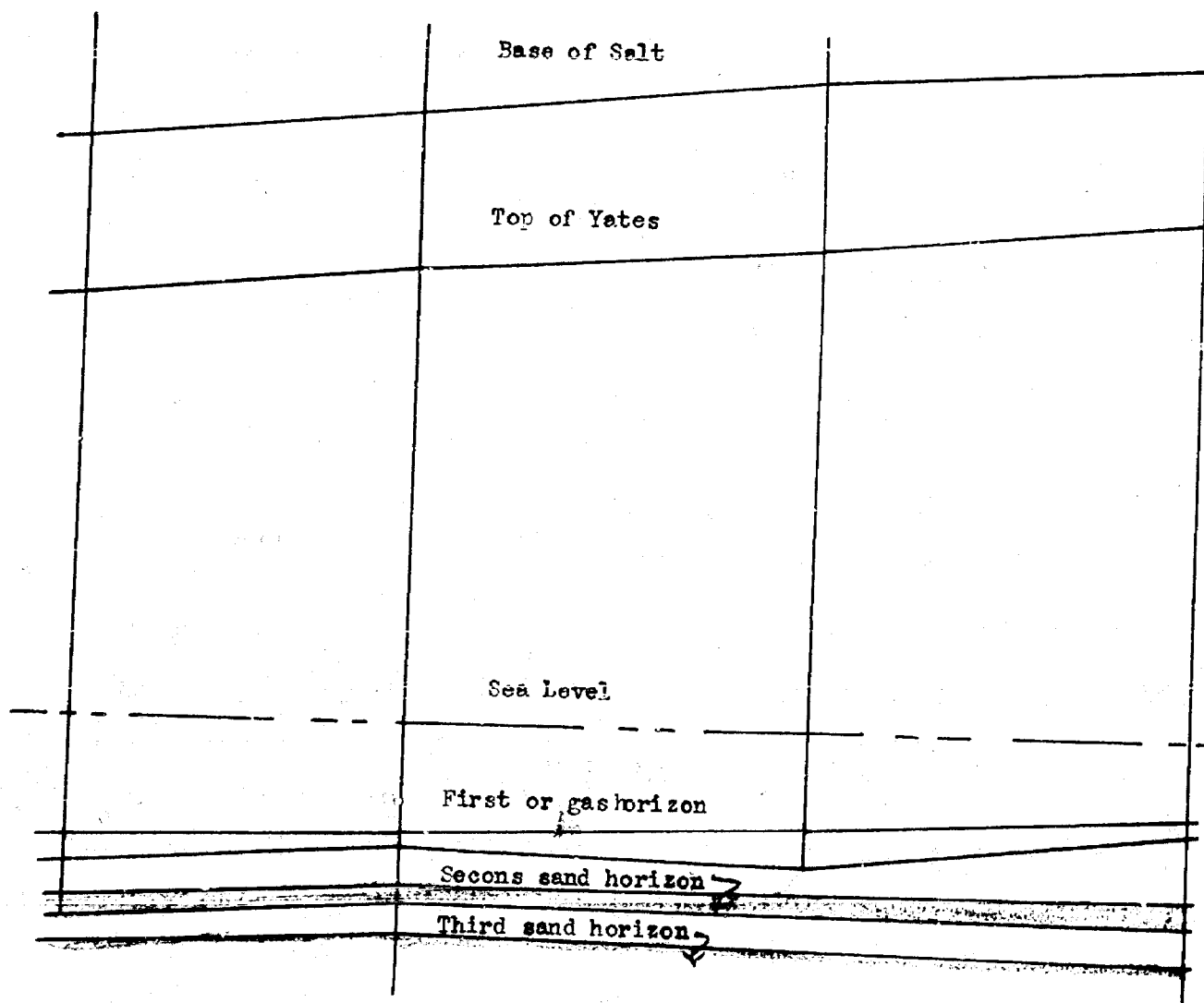

B.A. Bowers, Petroleum Engineer

GREAT WESTERN
Leonard P-3

EAST-WEST CROSS-SECTION THROUGH MURRAY FANNING NO. 1
GREAT WESTERN
Leonard B-1

MURRAY
Fanning 1

WESTERN GAS
Davis 1



APPLICATION FOR EXCEPTION TO NEW
MEXICO CONSERVATION COMMISSION ORDER
NO. 250 & FINAL ORDER IN THIS CAUSE
PROPOSED FOR ADOPTION ON AUGUST 29,
1940, COVERING

THE TEXAS COMPANY
W. T. Lanehart No. 1 - Langlie Field
Lea County, New Mexico

SUBJECT: APPLICATION FOR EXCEPTION TO NEW
MEXICO CONSERVATION COMITSSION ORDER
NO. 250 & FINAL ORDER IN THIS CAUSE
PROPOSED FOR ADOPTION ON AUGUST 29,
1940, COVERING

THE TEXAS COMPANY
W. T. Lanehart No. 1
Langlie Field, Lea County,
New Mexico

EXHIBIT I - DETAILED WELL HISTORY

During the 35 month period, from completion in June 1936 to plug back operations in May 1939, the subject well produced a total of some 39,000 barrels of oil, or an average of approximately 37 barrels per day from the lower oil horizon. Prior to the plug back, neighboring wells had been producing large volumes of gas and substantial amounts of oil from the upper horizon subsequently opened in the subject well by perforating the inner 5-1/2" string of casing. Completion of the latter work-over disclosed the existence of the substantial gas reservoir from which the subject well has produced gas only since that time.

EXHIBIT II - CUMULATIVE PRODUCTION - WELLS PRODUCING FROM UPPER
HORIZON IN NEIGHBORHOOD OF TICO - W. T. LANEHART NO. 1 -
LANGLIE POOL, LEA COUNTY, NEW MEXICO. FROM BEGINNING
THRU 6/30/40

A study of completion data of wells in the vicinity of The Texas Company W. T. Lanehart No. 1 indicates that there are 19 wells producing from the upper horizon. Despite the substantial oil production of some of these wells, the ratio of reservoir space voided by production of actual, plus the very conservatively estimated volume of gas to that voided by oil produced is greater than 62 to 1. Recently observed bottom hole pressure in the subject well (1225# @ + 200' - 8/12/40) compared with nearby well producing substantial quantities of oil from same horizon (1070# @ + 200 - 6/25/40 in Anderson-Prichard Carlson No. 2) clearly indicates that the production of gas from The Texas Company Lanehart No. 1 is lagging far behind comparative volumetric withdrawals of oil and gas from neighboring producing oil wells. In addition, wells producing oil from the upper horizon, also produce large volumes of casinghead gas, considerably in excess of the volumes calculated.

- EXHIBIT III - (a) NE-SW Cross Section thru portion of Langlie Field in Vicinity of TCo. W.T.Lanehart No. 1
- (b) NW-SE Cross Section thru portion of Langlie Field in Vicinity of TCo. W.T.Lanehart No. 1
- (c) Structure map of portion of Langlie Field, contoured on top of Yates Sand horizon showing lease ownerships, location of all wells and lines along which above cross sections drawn.
-

The stratigraphic level of the upper horizon from which the subject well is producing may be readily compared with the same and lower horizons from which neighboring wells are producing by the use of these exhibits. On the cross sections, wells producing only from horizons below, some apparently open to both upper and lower horizons and some in which only upper horizon is open have been included to show the relative levels and extent of separating beds.

SUMMARY:

The subject well contributes a very substantial portion of the daily deliveries of gas towards the fulfillment of contractual obligations provided in agreement with the connected gathering line, El Paso Natural Gas Company. Restriction of production from this well would jeopardize status of this agreement, result in confiscation of property and a loss to the revenue of the State of New Mexico.

The foregoing discussion together with the factual data attached are offered to substantiate our request for exemption of the subject well from restrictions which may be imposed by Order No. 250 or supersedeas gas/oil ratio order. Further supplementary data will be promptly furnished upon request.

AEW-DAT 8-27-40

DETAILED WELL HISTORY THE TEXAS COMPANY
GAS WELLS IN LANGLEIE POOL
LEA COUNTY, NEW MEXICO

W. T. Lanehart No. 1

Location	Center NE $\frac{1}{4}$ Sec. 29, T-25-S, R-37-E
Date Completed	June 9, 1936 May 14, 1939 (P.B. & Perf.)
Elevation	3031'
Casing Record	249' - 15 $\frac{1}{2}$ " 1045' - 9-5/8" 2460' - 7" 3156' - 5"
Total Depth	3308' P. B. 3098'
Tubing	None
Initial Production	132 MCF 151 Bbls. Oil 15 hrs Est. 240 Bbls/day On 5-15-39 51,000 MCF no oil 20 Min Test Perf. w/108 holes 2516'- 2730'
Oil or Gas Zones	2545-2570 G 2725-2756 G 3240-3280 O
Cumulative Production) Gas to 7-1-40) Oil	2,366,957 MCF 39,178 Bbls. Oil
Weighted G/O Ratio	60,400 Cu. Ft./Bbl.
Average Daily Pro-) Gas duction (June 1940)) Oil	5,656 MCF Gas 0
June 1940 G/O Ratio	-

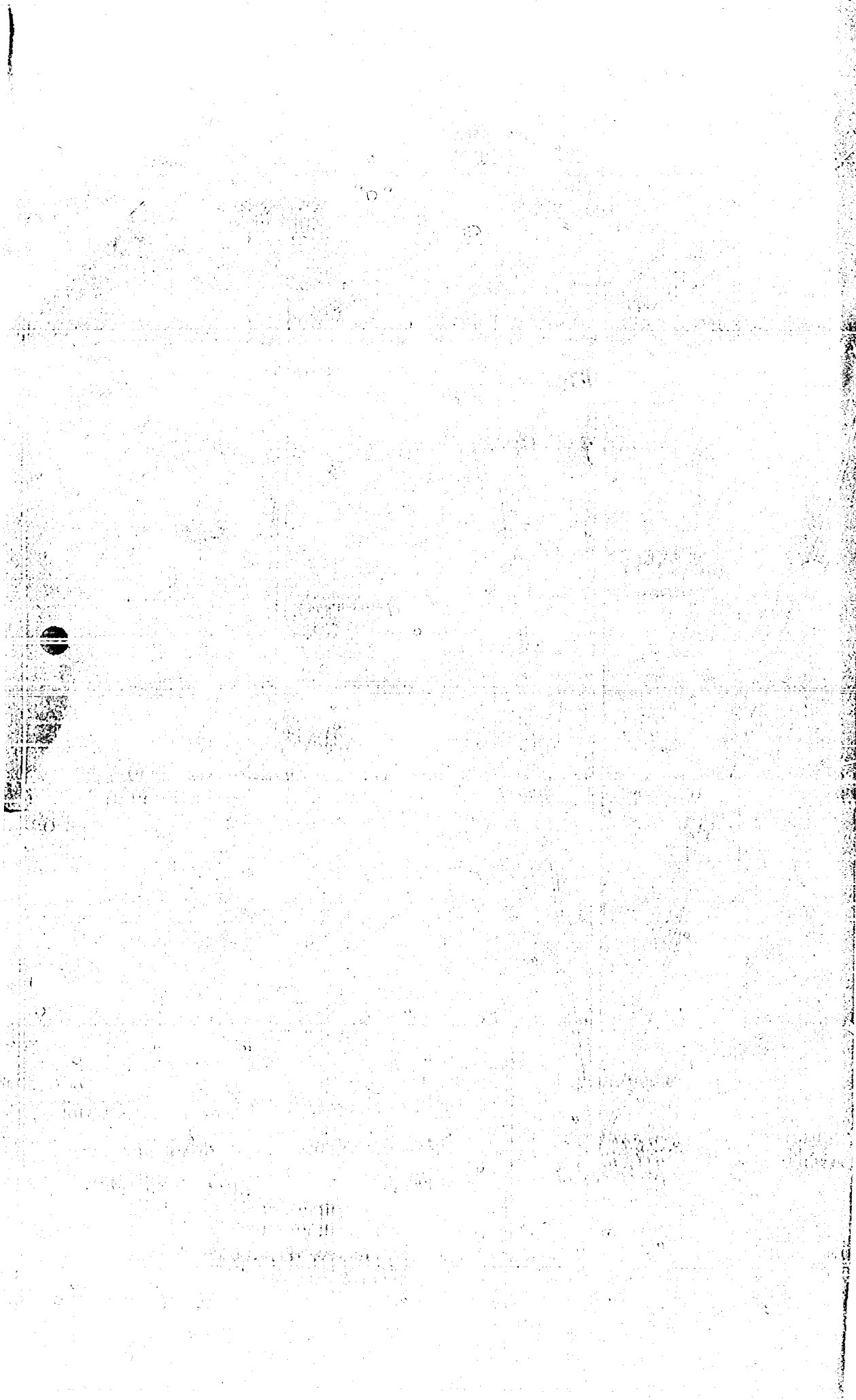
AEW-DAT - 8-27-40

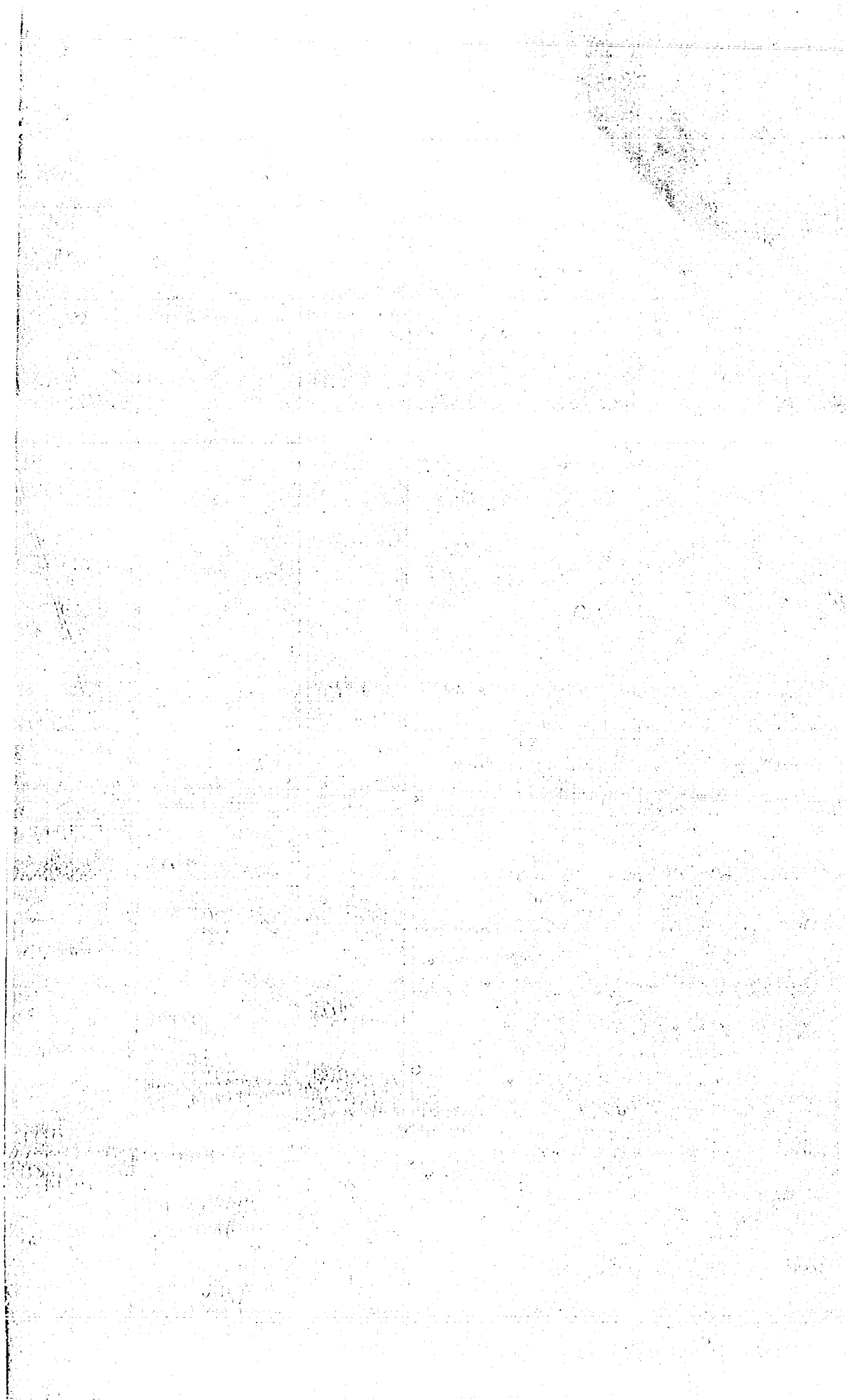
CUMULATIVE PRODUCTION DATA - WELLS PRODUCING FROM UPPER HORIZON IN NEIGHBORHOOD OF T.TCO. W. T. LANEHART NO. 1
 LANGLEIE POOL - LEA COUNTY, NEW MEXICO - FROM BEGINNING THRU JUNE 30, 1940

CUMULATIVE PRODUCTION TO 7-1-40

										RESERVOIR SPACE VOIDED		
COMPANY	FARM	WELL NO.	LOCATION S - T - R	COMP. DATE	OIL-BBLS	GAS-MCF	GAS-EQUIV. SPACE VOIDED IN BBLS.		TOTAL SPACE VOIDED	% TOTAL SPACE VOIDED		
							OIL-BBLS	IN BBLS.		VOIDED	OIL	GAS
Anderson-Finchard	Carlson	2	21-25-37	2-28-37	35,590				46,270	100.00		
			DD4-1-38									
	Gregory	1	33-25-37	10-26-37	4,346				5,650	100.00		
	John T. Lanehart	1	21-25-37	9-30-37	52,247				67,920	100.00		
Continental	Sholes "A"	1	19-25-37	1-12-29		7,213,697			13,345,000		100.00	
Gulf	Arnott-Ramsey "E"	2	16-25-37	3-8-40		488			900		100.00	
Leonard Oil Co.	Chas. T. Bates	1	20-25-37	9-11-36								
			DD5-10-40			370,681			685,800		100.00	
	Johns	1	20-25-37	2-8-40	5,187				6,740	100.00		
	Justis	1	20-25-37	3-3-38	13,573				17,640	100.00		
			DD3-3-38									
			PB10-18-38									
	"	2	20-25-37	7-30-37	53,002				68,900	100.00		
	B.C. Lanehart	1	21-25-37	4-28-36	68,910				89,580	100.00		
			DD&PB3-10-37									
	"	2	21-25-37	7-18-36	89,308				116,100	100.00		
	"	3	21-25-37	5-11-37	63,088				82,000	100.00		
	"	4	21-25-37	12-18-37	45,141				58,680	100.00		
			DD 9-10-39									
Leonard & Levers	B.M. Justis	1	19-25-37	6-25-31		2,894,119			5,354,000		100.00	
Republic	Crosby	1	29-25-37	6-7-29		767,807			1,420,000		100.00	
			DD 6-26-29									
Sun	W.T. Lanehart	1	20-25-37	9-10-36	14,586?				18,960	100.00		
The Texas Co. W.T. Lanehart		1	29-25-37	6-9-36		2,366,957			4,379,000		100.00	
			PB 5-14-39									
Tidewater	Coates "B"	1	21-25-37	2-27-37	31,982				41,580	100.00		
Western States W.H. Harrison		1	7-25-37	3-7-37		424,27			784,900		100.00	
						4,448,470			8,230,000			
	*From gas wells other than T.TCO. prior to 1-1-33											
	By using an assumed gas-oil ratio of 5000 cu. ft./bbl for wells producing oil only, the cumulative gas production is 5000 x 476,960 bbls, which is equal to											
TOTAL		19			476,960	20,871,493	620,020	38,611,600	39,231,620	1.58	98.42	
*Note: From beginning of operations El Paso Natural Gas Company purchased 8 total of 7,943,697 MCF of gas from companies other than the Texas Company to January 1, 1933. This covers the years 1929, 1930, 1931, and 1932. Beginning with 1935 other wells show total deliveries by companies, by wells, as shown in above tabulation.												
Distribution based on 4 months (1-1-33 to 5-1-33)												
Volume of wells in the 3 areas prior to 1-1-33												
					(Saves 207,960 MCF = 21% x 7,943,697 = 1,668,177							
					(Langlie 546,887 MCF = 56% x 7,943,697 = 4,448,470							
					(Total 228,078 MCF = 23% x 7,943,697 = 1,827,050							
					982,925							
					100%							
					7,943,697 MCF							







APPLICATION FOR EXCEPTION TO NEW
MEXICO CONSERVATION COMMISSION ORDER
NO. 250 & FINAL ORDER IN THIS CAUSE
PROPOSED FOR ADOPTION ON AUGUST 29,
1940, COVERING

THE TEXAS COMPANY

C. W. Shepherd No. (a) 1 - Jal Field
C. W. Shepherd No. (b) 1 - Jal Field
C. W. Shepherd No. (b) 2 - Jal Field
C. W. Shepherd No. (b) 3 - Jal Field
C. W. Shepherd No. (b) 4 - Jal Field
Lea County, New Mexico

SUBJECT: APPLICATION FOR EXCEPTION TO NEW
MEXICO CONSERVATION COMMISSION ORDER
NO. 250 & FINAL ORDER IN THIS CAUSE
PROPOSED FOR ADOPTION ON AUGUST 29,
1940, COVERING

THE TEXAS COMPANY
C.W. Shepherd (a) 1
C.W. Shepherd (b) 1
C.W. Shepherd (b) 2
C.W. Shepherd (b) 3
C.W. Shepherd (b) 4
Jal Field, Lea County,
New Mexico

EXHIBIT I - DETAILED WELL HISTORY

The detailed well history of the subject wells reflects the numerous and expensive work-over operations required during their producing life to obtain the recovery to date and assure the maximum ultimate recovery still remaining. The substantial quantities of oil produced by three of these wells during the earlier part of their life was produced from a horizon approximately 500' below the gas horizon to which they were plugged back and are producing from at the present (see Exhibit III (a)). Except for one well (C.W. Shepherd (b) 1) none of these wells produce any oil at present. All of the wells are connected to the El Paso Natural Gas Company high pressure (500-600#) gas gathering line, the gas sold being used for domestic and industrial purposes.

EXHIBIT II - CUMULATIVE PRODUCTION - ALL WELLS IN JAL FIELD -
FROM BEGINNING THRU 6/30/40

Although the subject wells are somewhat isolated from the other wells located in the Jal Field proper, the cumulative production of the Jal Field reflects the substantial volumes of gas which have been produced from this entire area. The subject wells are all located in Sections 5 & 6, which, by reference to Exhibit III (c) accompanying our Rhodes Field application (under separate cover) may be seen actually to lie in a continuation of the Rhodes Field gas structure.

EXHIBIT III (a) NW-SE Cross Section thru Rhodes & Portion of Eaves
& Jal Fields

(c) Structure map of Rhodes & portion of Eaves and
Jal Fields, contoured on top of Yates sand horizon,
showing lease ownerships, location of all wells and
lines along which above cross sections drawn.

Because of the comparative isolation of the subject wells from other wells in the Jal Field and their proximity to wells in

the Rhodes Field, the sections in which they are located were included on the structure map and wells shown on the cross section accompanying the application for the Rhodes Field (attached under separate cover). We respectfully refer you to these exhibits and the discussion accompanying same in support of request for exemption of the subject wells.

SUMMARY:

Each of the wells covered by this application also contribute to the daily delivery of gas for fulfillment of contractual obligations provided in an agreement with the connected gathering line. Confiscation of property, as well as loss of revenue to the State of New Mexico, will result should restriction of production be imposed on any of these wells by the existing or proposed gas/oil ratio order.

ATW-DAT - 8-26-40

WORY THE TEXAS COMPANY
IN JAL POOL
NEW MEXICO

W. Shepherd (b) 2

SE $\frac{1}{4}$ of SE $\frac{1}{4}$ Sec. 6,
T-26-S, R-37-E, U.S.
Government Permit

November 24, 1934
May 2, 1940 (P.B.
perforated)

271'

518' - 10-3/4"
124' - 7"

243'
P.B. 2992'

1" at 2882'

1,017 MCF
53 Bbls. fluid
3% B.S. $\frac{1}{8}$ " ck. 24 hrs.
est. 1440 Bbls./day
in 5-2-40 csg. perf. 2910'
2970' - 1,515 MCF with
100# back pressure after
aid. Est. open flow
1,000 MCF, no oil.

875-2706' G.
954-2962' G.
028-3034' G.
105-3112' O. & G.
126-3134' O. & G.

24,988 MCF
03,973 Bbls. Oil

40 Cu.Ft./Bbl.

55 MCF Gas
0

C.W. Shepherd (b) 3

NE $\frac{1}{4}$ of NE $\frac{1}{4}$ Sec. 5,
T-26-S, R-37-E, U.S.
Government Permit

April 7, 1937
P.B. during comple-
tion

2974'

250' - 10-3/4"
2626' - 7-5/8"
3156' - 5-1/2"

3290' P.B. 3082 to
shut off bottom water
when completing.

None

10,000 MCF
No Oil
Perf. Casing 2730'-2750'
during completion
2,890 MCF (9/10/39)
No Oil

2708-2713' G.
2728-2747' G.
3190-3228' G.

665,177 MCF
None

458 MCF Gas
0

C.W. Shepherd (b) 4

Center SE $\frac{1}{4}$ Sec. 5,
T-26-S, R-37-E, U.S.
Government Permit

June 25, 1937
P.B. during comple-
tion

2989'

250' - 10-3/4"
2624' - 7-5/8"
2990' - 5-1/2"

3200' P.B. 2960' to
shut off bottom water.

None

8,500 MCF
No Oil
No perforations
5 $\frac{1}{2}$ " casing cut & recovered
to a T.D. of 2800' leaving
a 5 $\frac{1}{2}$ " liner from 2800' to
2990' during completion.
Producing from gas horizon
behind liner.
Initial Rock Pressure 1240#

2825-2860' G.
3075-3090' G.
3135-3150' G.
3195-3200' G.

808,638 MCF
None

444 MCF Gas
0

DETAILED WELL HIST
GAS WELLS
LEA COUNTY

	<u>C.W.Shepherd (a) 1</u>	<u>C.W.Shepherd (b) 1</u>	<u>C.</u>
Location	SE $\frac{1}{4}$ of NE $\frac{1}{4}$ Sec. 6, T-26-S, R-37-E, U.S. Government Permit	NW $\frac{1}{4}$ of SW $\frac{1}{4}$ Sec. 5, T-26-S, R-37-E, U.S. Government Permit	NE T- G
Date Completed	August 10, 1929 Jan. 23, 1936 (P.B.)	May 8, 1933 Feb. 13, 1934 (Drld.Dpr.) Feb. 5, 1938 (P.B.)	Ne Ma &
Elevation	2977'	2970'	29
Casing Record	18' - 20" 898' - 12 $\frac{1}{2}$ " 2665' - 8-1/4" 3150' - 6-5/8"	499' - 12 $\frac{1}{2}$ " 2679' - 9" 3100' - 7"	1. 3.
Total Depth	3318' P.B. 3295' P.B. 2836' & casing perf. 2759'-2823' 1-23-36	3262' 3355' after drlg. dpr. P.B. 3072'	31 P.
Tubing	2" at 2827' open end no perf.	2 $\frac{1}{2}$ " & packer at 3010' Perf. below packer	2
Initial Production	15,600 MCF 702 Bbls. fluid 10% water 24 hours. Initial Rock Pressure 1400#	2,000 MCF 527 Bbls. fluid 37% water 24 hours. Initial Rock Pressure 1120# After drlg. deeper 2/13/34 2,332 MCF, 165 Bbls. fluid - 50% water 24 hours. After P.B. 2/5/38 & perf. a casing 2890'-3051' 7,168 MCF Gas, 72 Bbls. Oil, 500 Bbls. water 24 hours through tubing.	1. 2. 10 E 6 5 5
Oil or Gas Zones	3206-3212' O. 3223-3300' O. & G.	3180-3200' O. 3262-3355' O.	2 2 3 3 3
Cumulative Produc-) Gas 2,986,659 MCF tion to 7-1-40) Oil 816,953 Bbls. Oil		3,246,078 MCF 145,844 Bbls. Oil	1
Weighted G/O Ratio	3,655 Cu.Ft./Bbl.	22,250 Cu.Ft./Bbl.	2
Average Daily Pro-) Gas 738 MCF Gas duction (June 1940) Oil 0		1,616 MCF Gas 7 Bbls. Oil	8
June 1940 G/O Ratio	-	230,900 Cu.Ft./Bbl.	

AEW-JRH 8-27-40

EXHIBIT I.

CUMULATIVE PRODUCTION DATA - ALL WELLS IN JAL POOL - LEA COUNTY, NEW MEXICO
FROM BEGINNING YEAR JUNE 30, 1940

RESERVOIR PRODUCTION TO 7-1-40												
COMPANY	WELL NO.	LOCATION S - T - R	COMP. DATE	OIL-BBLS	GAS-MCF	OIL-BBLS	SPACE VOIDED		TOTAL SPACE VOIDED	TOTAL SPACE VOIDED	% SPACE VOIDED	
							GAS-EQUIV. SPACE VOIDED IN BBLS.	OIL				GAS
Amerada	D.L. Dyer	1	31-25-37	69,846		90,800		90,800	100.00			
Anton Chico Dev. Co.	T.M. Condit	1	12-25-36	108,915	274,352	141,590	507,000	648,590	21.83	78.17		
Barnsdall Oil Co.	Forrist	1	24-25-36	38,730		50,349		50,349	100.00			
Byrd-Frost, Inc.	E.J. Wells (Continental)	1	1-25-36	3,299		8,199		8,199	100.00			
	E.J. Wells "A"	1	13-25-36	81,506	From #2 351,806	105,960	651,000	756,960	14.00	86.00		
	"	2	"									
Cities Ser. O. Co.	R.L. Dyer	1	31-25-37	147,486		191,732		191,732	100.00			
	"	2	"	74,970		97,461		97,461	100.00			
	Wm. A. Lindley "B"	1	13-25-36	293,235	From #1 1,438,942	381,203	2,662,000	3,043,203	12.53	87.47		
	"	2	"									
	"A"	1	14-25-36	199,314		259,108		259,108	100.00	100.00		
	"	2	"		1,016,792		1,882,000	1,882,000		100.00		
Continental Oil Co.	M.F. Sholes "A"	1	13-25-36	87,856	1,808,118	114,213	3,345,000	3,459,213	3.30	96.70		
	"	2	"		604,688		1,119,000	1,119,000		100.00		
	"A"	1	24-25-36		4,027,864		7,452,000	7,452,000		100.00		
	"	2	"		1,022,876		1,892,000	1,892,000		100.00		
	"B"	1	13-25-36	278,975		362,668		362,668	100.00			
	"	2	"									
Formerly Hammond	(M.F. Sholes	1	"		56,353	842,399	73,259	1,558,000	1,631,259	4.49	95.51	
	"	2	"			910,505		1,684,000	1,684,000		100.00	
	E.J. Wells A-11	1	11-25-36	125,177		162,730		162,730	100.00			
	"A-12	1	12-25-36	121,367		157,777		157,777	100.00			
	"	2	"									
	Ascarate "B"	1	24-25-36	129,493		168,347		168,347	100.00			
Gulf Oil Co.	M.H. Humphreys	2	25-25-36	12,643		16,439		16,439	100.00			
	Arn. Ramsey "B"	1	32-25-37	3,535	732,852	4,596	1,356,000	1,360,596	.34	99.66		
Humble Oil Co.	Wm. Lindley "A"	1-4	Incl. Sec. 25, 13&24	772,101	1,893,280	1,003,731	3,508,000	4,511,731	23.25	77.75		
	"	2	25-36									
	"	1	13-25-36									
	"B"	1	14-25-36	187,033	No. 3 P & A 9-15-35 Cumulative with Nos. 1-4 Incl.	243,147		243,147	100.00			
	J.A. Koonce	1	14-25-36	78,533		102,097	328,000	430,097	23.74	76.26		
Johnson & Johnson	H.M. Wilson "B"	1	23-24-36	73,733		95,859		95,859	100.00			

Magnolia Pet. Co.	W. Lindley	1	26-25-36	147,336	191,539	191,539	100.00
Repollo Oil Co.	S.W. Gloyd	1	12-25-36	75,714	96,428	913,428	10.78
	"	2	"	64,529	83,888	1,358,888	6.17
	Hanegan	1	12-25-36	86,663	112,662	112,662	100.00
	"	2	"	78,081	101,505	101,505	100.00
	"	3	12-25-36	108,189	140,646	140,646	100.00
	E.C. Stephens	1	13-25-36	91,889	119,456	1,834,456	6.51
	"	2	"	53,877	70,040	2,337,040	3.00
				927,166	1,715,000	1,715,000	
				1,225,430	2,267,000	2,267,000	
J.N. Rush (Now Continental Sholes "A" 2)	W.F. Sholes "A"	1	24-25-36	31,661	41,159	41,159	100.00
Skelly Oil Co. W.T. Joyner		1	26-25-36	231,882	301,447	301,447	100.00
Southern Pet. Exp.	Ascarate "A"	1	24-25-36	102,770	133,601	133,601	100.00
	"	2	"	94,448	122,782	122,782	100.00
	"	1	"	125,620	163,306	163,306	100.00
Stanolind Oil Co.	Gregory	1	31-25-37	265,978	152,004	281,000	624,171
	"	1	6-26-37	816,923	2,986,659	5,525,000	6,587,039
	"	2	"	31,354	209,984	388,000	428,760
	"	1	5-26-37	145,844	3,246,078	6,005,000	6,194,597
	"	2	6-26-37	103,975	24,988	46,000	181,165
	"	3	5-26-37	4-7-37	665,177	1,231,000	1,231,000
	"	4	6-25-37	808,638	808,638	1,496,000	1,496,000
Tidewater Asso. Oil Co. Coates "A"		1	31-25-37	64,138	83,379	83,379	100.00
*From gas wells other than TTCO. prior to 1-1-33							
By using an assumed gas-oil ratio of 5000 cu.ft./bbl for wells producing oil only, the cumulative gas production is 5000 x 2,406,373 bbls which is equal to				12,031,865	22,259,000	22,259,000	
TOTAL		54		5,666,019	40,337,140	7,365,835	74,627,000
						81,992,835	8.98
							91.02

*Note: From beginning of operations El Paso Natural Gas Company purchased a total of 7,943,697 MCF of gas from companies other than The Texas Company to January 1, 1933. This covers the years 1929, 1930, 1931, and 1932. Beginning with 1933 figures show total deliveries by companies, by wells, as shown in above tabulation.

Distribution based on 4 months (1-1-33 to 5-1-33)
Volume of wells in the 3 areas prior to 1-1-33

(Rates 207,960 MCF = 21% x 7,943,697 = 1,668,177)
(Single 546,887 MCF = 56% x 7,943,697 = 4,448,470)
(Total 228,078 MCF = 23% x 7,943,697 = 1,827,050)
982,925 100% 7,943,697 MCF

APPLICATION FOR EXCEPTION TO NEW
MEXICO CONSERVATION COMMISSION ORDER
NO. 250 & FINAL ORDER IN THIS CAUSE
PROPOSED FOR ADOPTION ON AUGUST 29,
1940, COVERING

THE TEXAS COMPANY
M. L. Parker No. 1 - Eaves Field
Lea County, New Mexico

SUBJECT: APPLICATION FOR EXCEPTION TO NEW
MEXICO CONSERVATION COMMISSION ORDER
NO. 250 & FINAL ORDER IN THIS CAUSE
PROPOSED FOR ADOPTION ON AUGUST 29,
1940, COVERING

THE TEXAS COMPANY
M. L. Parker No. 1,
Eaves Field, Lea County,
New Mexico

EXHIBIT I - DETAILED WELL HISTORY

The detailed history of this well reflects the short life (28 months) during which it produced an average of 30 barrels per day with large initial volume of water, before plugging back to the gas horizon, some 215' higher, from which it is producing at present. Since this plug back, it has produced gas only.

EXHIBIT II - CUMULATIVE PRODUCTION - ALL WELLS IN EAVES FIELD -
FROM BEGINNING THRU 6/30/40

Located on the extreme Southeastern flank of the Eaves Field, the subject well nevertheless has the producing characteristics of the majority of wells in the Eaves Field as is indicated by individual well cumulative production shown by this exhibit. Large volumes of gas have been and are still being produced from this field. By referring to this tabulation and location of other producing wells near the subject well, it may be seen that these are also producing primarily gas.

EXHIBIT III (b) NE-SW Cross Section thru Rhodes & portions of Eaves
& Jal Fields

(c) Structure map of Rhodes & portions of Eaves & Jal Fields, contoured on top of Yates Sand horizon, show lease ownerships, location of all wells and lines along which cross sections drawn.

Although the subject well is located in the Eaves Field as designated, it is producing from approximately the same stratigraphic level as nearby wells in the Rhodes Field. For this reason and for purpose of showing continuity, the subject well has been shown on structure map and included in cross section (Exhibits III (b) & III (c) respectively) accompanying our Rhodes Field request, attached hereto under separate cover. We respectfully refer you to these exhibits and geologic discussion accompanying same for supplementary data for the subject well. Please note particularly proximity of stratigraphic level of top of gas pay in M. L. Parker No. 1 with that in The Texas

Company's - Moberly (b) 1 and Cagle (b) 2, producing gas wells in the Rhodes Field.

SUMMARY:

The foregoing data reveal that, after producing the economically recoverable oil from the lower oil horizon in which the subject well was originally completed, it was plugged back and is now producing gas penetrated at approximately 2950'. It is contributing to the daily deliveries of gas to the El Paso Natural Gas Company's high pressure (500-600#) line, whence it is used for domestic and industrial purposes. It is possible that with continued operation, the sale of gas may yield a fair return on the investment in this well which the earlier limited oil production from same obviously failed to do. Restriction of the present production will result in confiscation of property and loss of revenue to the State of New Mexico.

DETAILED WELL HISTORY THE TEXAS COMPANY
GAS WELLS IN EAVES POOL
LEA COUNTY, NEW MEXICO

M. L. Parker No. 1

Location	NW $\frac{1}{4}$ of NW $\frac{1}{4}$ Sec. 29 T-26-S, R-37-E, U. S. Government Permit
Date Completed	April 17, 1935 September 3, 1937 (P.B.)
Elevation	2952'
Casing Record	160' - 12 $\frac{1}{2}$ " 1645' - 9-5/8" 3012' - 7"
Total Depth	3248' P. B. 3043' (9-3-37)
Tubing	2" at 3028' 6' of perf. bottom of which is 5' from bottom of tubing.
Initial Production	700 MCF 350 Bbls fluid 60% water 24 hours 9-3-37 Casing perf. 2950'-3008' 6,000 MCF* Gas
Oil or Gas Zones	2970-2974' G 3029-3031' O&G
Cumulative Production) Gas to 7-1-40) Oil	1,869,225 MCF 25,797 Bbls. Oil
Weighted G/O Ratio	72,460 cu. ft./bbl
Average Daily Pro-) Gas duction (June 1940)) Oil	2,100 MCF Gas 0
June 1940 G/O Ratio	-

* Ultimately increased to peak of 9,900 MCF

AEW-DAT - 8-27-40

CUMULATIVE PRODUCTION DATA - ALL WELLS IN EAVES POOL - IEA COUNTY, NEW MEXICO
FROM BEGINNING THRU JUNE 30, 1940

CUMULATIVE PRODUCTION TO 7-1-40

RESERVOIR SPACE VOIDED

COMPANY	FARM	WELL NO.	LOCATION	COMP.	OIL-BBL'S	GAS-MCF	OIL-BBL'S	GAS-EQUIV. SPACE VOIDED IN BBL'S.	TOTAL SPACE VOIDED	TOTAL SPACE VOIDED	% OIL	% GAS
Continental	J.S. Javes "A"	1	19-26-37	TTCo. Wells	19,046	6,866,345	24,760	12,703,000	12,727,760	121,594	100.00	99.80
"	"	2	"	"	93,534		121,594		121,594	93,239	100.00	
"	"	3	"	"	71,722		93,239		93,239	107,782	100.00	
"	"	1	30-26-37	"	82,909		107,782		107,782	78,566	100.00	
"	"	2	"	"	60,435		78,566		78,566	93,811	100.00	
"	"B"	1	"	"	72,162		93,811		93,811	48,376	100.00	
"	W. McCallister "A"	1	24-26-37	"	37,212		48,376		48,376	289,180	100.00	
"	"	2	"	"	222,446		289,180		289,180	116,342	100.00	
"	"	3	"	"	89,494		116,342		116,342	48,927	100.00	
"	"	4	"	"	37,636		48,927		48,927	168,337	100.00	
Gulf	V. Ramsey "A"	1	12-26-36	"	129,490		168,337		168,337	6,700,513	3.07	96.93
Stanolind	C.M. Farnsworth "A"	1	13-26-36	"	158,087	3,510,566	205,513	6,495,000	6,700,513	307,642	100.00	
"	"	2	"	"	236,648		307,642		307,642	149,721	100.00	
"	"	3	18-26-37	"	115,170		149,721		149,721	132,432	100.00	
"	"	4	"	"	101,871		132,432		132,432	504,588	13.39	86.61
"	"	5	"	"	51,991	235,976	67,588	4,334,000	4,392,958	1.34	98.66	
"	"	1	7-26-37	"	45,352	2,342,514	58,958	3,810,000	3,853,953	.62	99.38	
"	"	2	"	"	18,410	2,059,598	23,933	1,754,000	1,784,212	527,810	20.81	79.19
"	"B"	3	"	"	23,240	948,293	30,212	418,000	527,810	7,245	100.00	
TTCo.	E.G. Moberly (a)	1	8-26-37	5-15-34	84,474	225,866	109,816	3,458,000	3,491,556	3,086,000	.96	99.04
"	" (c)	1	17-26-37	5-16-29	5,573		7,245		7,245			
"	"	1	29-26-37	4-17-35	25,797	1,869,225	33,536	3,086,000	3,086,000			
"	M.L. Farker	1				1,668,177						
TOTAL		22			1,782,699	22,543,146	2,317,510	5,211,000	5,211,000	44,023,510	5.26	94.74
*Note: From gas wells other than TTCo. prior to 1-1-33												
By using an assumed gas-oil ratio of 2000 cu.ft./bbl for												
wells producing oil only; the cumulative gas production is												
2000 x 1,408,293 which is equal to												
2,816,586												
From beginning of operations El Paso Natural Gas Company purchased a total of 7,943,697 MCF of gas from companies other than The Texas Company to January 1, 1933. This covers the years 1929, 1930, 1931, and 1932. Beginning with 1933 figures show total deliveries by companies, by wells, as shown in above tabulation.												
Distribution based on 4 months (1-1-33 to 5-1-33)												
Volume of wells in the 3 areas prior to 1-1-33												
{ Javes 207,960 MCF = 21% x 7,943,697 = 1,668,177)												
{ Langble 546,987 MCF = 56% x 7,943,697 = 4,448,470)												
{ Jai 228,078 MCF = 23% x 7,943,697 = 1,827,050)												
582,925 100% 7,943,697 MCF												

*From gas wells other than TTCo. prior to 1-1-33
 By using an assumed gas-oil ratio of 2000 cu.ft./bbl for
 wells producing oil only, the cumulative gas production is
 2000 x 1,408,283 which is equal to

*Note: From beginning of operations El Paso Natural Gas Company purchased a total of 7,943,697 MCF of gas from companies other
 than The Texas Company to January 1, 1933. This covers the years 1929, 1930, 1931, and 1932. Beginning with 1933 fig-
 ures show total deliveries by companies, by wells, as shown in above tabulation.

Distribution based on 4 months (1-1-33 to 5-1-33)
 Volume of wells in the 3 areas prior to 1-1-33

Eaves	207,960 MCF = 21% x 7,943,697 = 1,668,177
Langille	546,987 MCF = 56% x 7,943,697 = 4,448,470
(Total)	228,078 MCF = 23% x 7,943,697 = 1,827,050
	582,925 100% 7,943,697 MCF

APPLICATION FOR EXCEPTION TO NEW
MEXICO CONSERVATION COMMISSION ORDER
NO. 250 & FINAL ORDER IN THIS CAUSE
PROPOSED FOR ADOPTION ON AUGUST 29,
1940, COVERING

THE TEXAS COMPANY

C. C. Cagle No. (a) 1 - Rhodes Field
C. C. Cagle No. (a) 2 - Rhodes Field
C. C. Cagle No. (b) 1 - Rhodes Field
C. C. Cagle No. (b) 2 - Rhodes Field
H. G. Moberly No. (b) 1 - Rhodes Field
W. H. Rhodes No. (a) 1 - Rhodes Field
W. H. Rhodes No. (a) 2 - Rhodes Field
State of N.M. "Y" No. 1 - Rhodes Field
Lea County, New Mexico

SUBJECT: APPLICATION FOR EXCEPTION TO NEW
MEXICO CONSERVATION COMMISSION ORDER
NO. 250 & FINAL ORDER IN THIS CAUSE
PROPOSED FOR ADOPTION ON AUGUST 29,
1940, COVERING

THE TEXAS COMPANY
W. H. Rhodes No. (a) 1
W. H. Rhodes No. (a) 2
C. C. Cagle No. (a) 1
C. C. Cagle No. (a) 2
C. C. Cagle No. (b) 1
C. C. Cagle No. (b) 2
H. G. Moberly No. (b) 1
State of N. M. "Y" No. 1
Rhodes Field - Lea County,
New Mexico.

EXHIBIT I - DETAILED WELL HISTORY

Exhibit I sets out completion data, corrective and repair work and present producing status. From the cumulative production figures to 7/1/40, it may be seen that all of the subject wells have produced, since their completion, practically gas only. With the exception of Rhodes (a) 1 and (a) 2, none of them have ever appeared on orders setting allowables for oil wells. All are now, and have been since completion, connected to the high pressure (500-600#) gas gathering line of the El Paso Natural Gas Company. All of the gas produced is sold to the latter company and used for domestic and industrial purposes.

For general history of subject wells and detailed discussion of Rhodes (a) 1 and (a) 2, we respectfully direct your attention to The Texas Company's "Application for Exemption to Conservation Commission Order No. 238" dated March 16, 1940. We also request that the latter application, to which this application is a supplement, be attached hereto and made a part hereof.

EXHIBIT II - CUMULATIVE PRODUCTION - ALL WELLS IN RHODES FIELD
FROM BEGINNING THROUGH 6/30/40

The tabulation of cumulative production of all wells in the Rhodes Field shows at a glance that all of these wells have been produced to market the primary constituents of this reservoir - gas. With few exceptions, all of the wells in the Rhodes Field have always been classified as gas wells and restriction imposed by any gas-oil ratio rule would render it uneconomical to produce them.

- EXHIBIT III - (a) NW-SE CROSS SECTION THRU RHODES & PORTION OF EAVES & JAL FIELDS.
(b) NE-SW CROSS SECTION THRU RHODES & PORTION OF EAVES & JAL FIELDS.
(c) STRUCTURE MAP OF RHODES & PORTION OF EAVES & JAL FIELDS, CONTOURED ON TOP OF YATES SAND HORIZON, SHOWING LEASE OWNERSHIPS, LOCATION OF ALL WELLS AND LINES ALONG WHICH ABOVE CROSS SECTIONS DRAWN.
(d) GEOLOGY OF THE RHODES FIELD.
-

The extensive area over which the wells shown on the cross sections comprising these exhibits are spread, the substantial gas bearing horizons encountered in and the volumes produced to date from each of them clearly marks this entire area as a reservoir whose primary constituents are gas. A detailed study of the logs of these wells (which are on file with the Commission) will reveal the stratified, lenticular character of the porous horizons encountered which renders it extremely difficult, if not impossible, to isolate and define the numerous horizons contributing to the production from the wells in this field. Pay zones are numerous and appear to be separated by practically impermeable layers of dolomite.

A copy of a discussion of the Rhodes Field which was a part of previous request for exemption for two of the subject wells is attached hereto for convenient reference. In this brief discussion, the extensive gas accumulation of the Rhodes Field is attributed to the lithology of formations comprising the reservoir.

SUMMARY -

It has been our purpose to present briefly, yet in a comprehensive manner, the pertinent data to support our request for exemption of the subject wells. Any further data desired will be furnished at the Commission's request. Each of these wells contribute to the daily delivery of gas for the fulfillment of contractual obligations provided in an agreement with the connected gathering line. Any restrictions imposed upon the production and sale of gas from the subject wells would result in confiscation as well as a loss of revenue to the State of New Mexico.

BY THE TEXAS COMPANY
IN RHODES POOL
NEW MEXICO

	2	H.G.Moberly (b) 1	W.H.Rhodes (a) 1	W.H.Rhodes (a) 2	St. N.M. "Y" 1
Sec. 15 7-E, ant		NE $\frac{1}{4}$ of NE $\frac{1}{4}$ Sec. 21 T-26-S, R-37-E, U.S. Government Permit	NE $\frac{1}{4}$ of NW $\frac{1}{4}$ Sec. 22 T-26-S, R-37-E. U.S. Government Permit	NW $\frac{1}{4}$ of SE $\frac{1}{4}$ Sec. 22 T-26-S, R-37-E, U.S. Government Permit	SE $\frac{1}{4}$ of NE $\frac{1}{4}$ Sec. 16 T-26-S, R-37-E
38		Feb. 26, 1938 Aug. 26, 1939 Ran 1" Tubing & Cleaned Out	Nov. 4, 1927	June 21, 1937	Feb. 5, 1940
		2995'	2989'	2995'	2994'
/8"		265' - 13" 1112' - 9-5/8" 2952' - 7"	183' - 15 $\frac{1}{2}$ " 546' - 12 $\frac{1}{2}$ " 3040' - 8 $\frac{1}{2}$ "	255' - 15 $\frac{1}{2}$ " 1150' - 10-3/4" 3100' - 7-5/8"	218' - 13" 1111' - 9-5/8" 2953' - 7"
		3180'	3213'	3280'	3140'
3' ttom of from tubing		1" at 3178' bot- tom slotted 6" long 1/4" wide	1" at 3126' installed 12/22/38 3' of perforation	1" at 3141' in- stalled 12/1/39	None
		19,500 MCF No Oil Initial Rock Press. 1050# 8-26-39 10 Bbls Oil on Test prior to G/O, 7-19-39 12,200 MCF	23,000 MCF 120 bbls oil 24hrs Initial Rock Press. 1060#	25,000 MCF No Oil Initial Rock Press. 920#	13,700 MCF No Oil Initial Rock Press. 900#
G		3005-3180' G	3040' Top Gas 3105-3160' G 3160-3213' O	3050-3055' G 3122-3140' G 3190-3210' O&G	2970-3140' G
3F 1		1,183,693 MCF 163 Bbls Oil	12,363,277 MCF 138,686 Bbls. Oil	2,015,809 MCF 38,507 Bbls Oil	272,279 MCF O
u.ft.		7,262,000 cu.ft. bbl	89,150 cu.ft. bbl	52,350 cu.ft. bbl	-
		1,234 MCF Gas 1/3 Bbl Oil	1,201 MCF Gas 17 Bbls Oil	1,326 MCF Gas 31 Bbls Oil	1,857 MCF Gas O
		4,113,000 cu.ft. bbl	71,823 cu.ft. bbl	43,130 cu.ft. bbl	-

DETAILED WELL HIST
GAS WELLS IN
LEA COUNTY

	<u>C.C.Cagle (a) 1</u>	<u>C.C.Cagle (a) 2</u>	<u>C.C.Cagle (b) 1</u>	<u>C.C.Cagle (b) 2</u>
Location	NE $\frac{1}{4}$ of SW $\frac{1}{4}$ Sec. 9, T-26-S, R-37-E, U.S. Government Permit	NE $\frac{1}{4}$ of NW $\frac{1}{4}$ Sec. 9, T-26-S, R-37-E, U.S. Government Permit	NW $\frac{1}{4}$ of SW $\frac{1}{4}$ Sec. 15, T-26-S, R-37-E, U.S. Government Permit	SW $\frac{1}{4}$ of SW $\frac{1}{4}$ Sec. 15, T-26-S, R-37-E, U.S. Government Permit
Date Completed	Jan. 8, 1929	July 14, 1938	Jan 2, 1936	Jan. 19, 1936
Elevation	2975'	2985'	3000'	2999'
Casing Record	651' - 12 $\frac{1}{2}$ " 2701' - 8 $\frac{1}{4}$ " 3020' - 6-5/8"	126' - 13" 1042' - 9-5/8" 2780' - 7"	257' - 12 $\frac{1}{2}$ " 1137' - 9-5/8" 3030' - 7"	262' - 13" 1124' - 9-5/8" 3010' - 7"
Total Depth	3473' P.B. 3200'	3060'	3164'	3216'
Tubing	None	None	None	1" at 2991' of perf. bottom of tubing which is 3' bottom of tubing
Initial Production	55,000 MCF No Oil Initial Rock Press. 1400#	50,000 MCF No Oil Initial Rock Press. 840#	34,483 MCF No Oil	11,000 MCF No Oil Initial Rock Press. 876#
Oil or Gas Zones	3038-3045' G 3070-3078' G 3122-3123' G 3148-3162' G 3175-3180' G	2690-2780' G 2790-3060' G	3030' Top Gas 3115-3164' G	3015-3216' G
Cumulative Gas Production to 7-1-40	18,545,440 MCF Oil 0	4,238,597 MCF Oil 0	8,570,007 MCF Oil 0	1,131,753 MCF Oil 143 Bbls Oil
Weighted G/O Ratio	-	-	-	7,914,000 c bbl
Average Daily Production (June 1940)	Gas 2,588 MCF Gas 0 Oil 0	6,627 MCF Gas 0	3,010 MCF Gas 0	849 MCF Gas 0
June 1940 G/O Ratio	-	-	-	-

AEW-DAT - 8-27-40

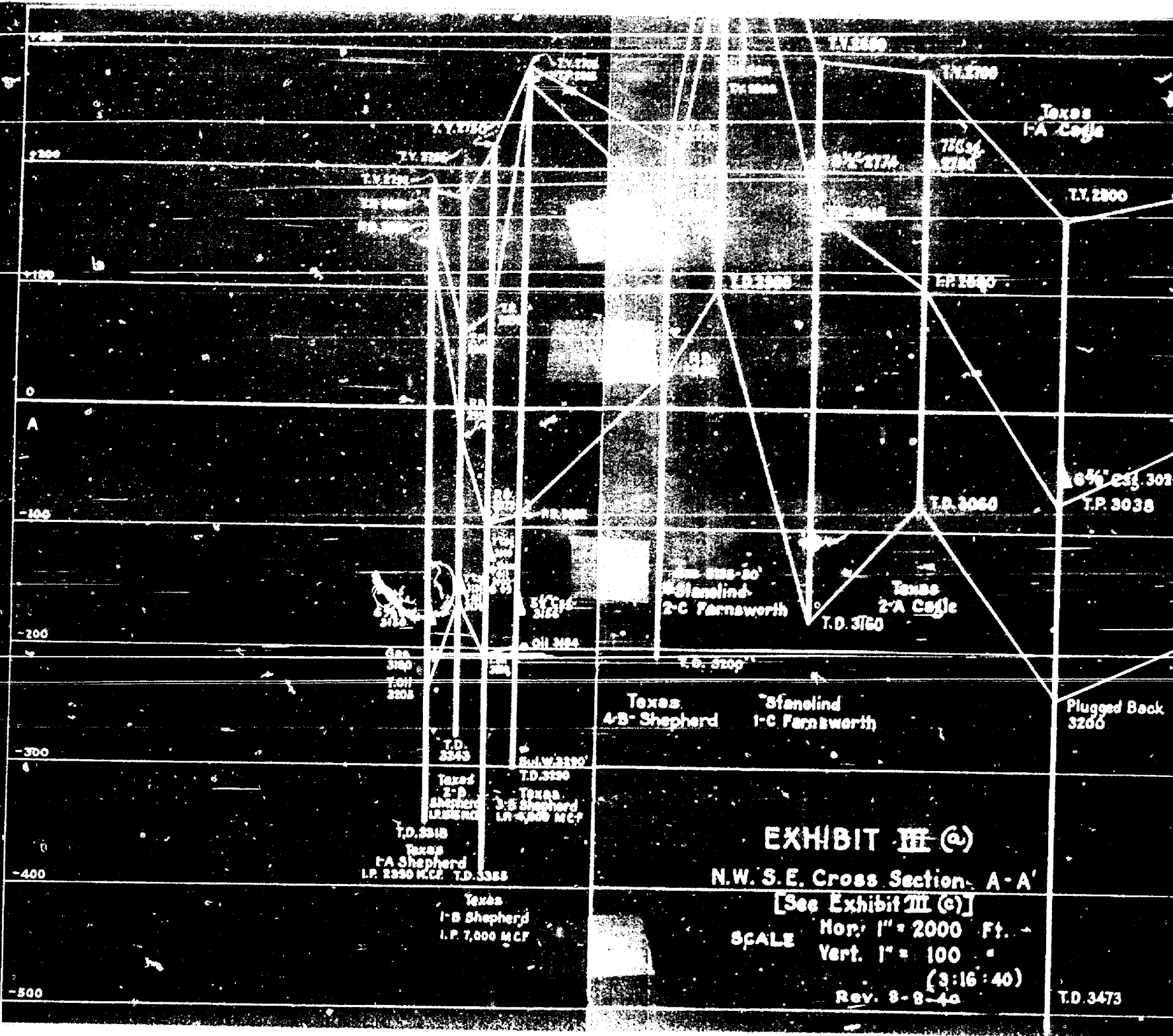
CUMULATIVE PRODUCTION DATA - ALL WELLS IN RHODES POOL - LEA COUNTY, NEW MEXICO
FROM BEGINNING THRU JUNE 30, 1940

CUMULATIVE PRODUCTION TO 7-1-40													
RESERVOIR SPACE VOIDED													
COMPANY	FARM	WELL NO.	LOCATION S - T - R	COMP. DATE	OIL-BBLS	GAS-MCF	OIL-BBLS	GAS-EQUIV.		TOTAL SPACE VOIDED	TOTAL SPACE VOIDED	TOTAL SPACE VOIDED	% GAS
								SPACE VOIDED IN BBLS.	VOIDED				
Great Western State of N.M.		1	16-26-37	11-20-37	2,793	2,397,099	3,630	4,435,000		4,438,630		.08	99.92
Ohio Oil Co.	K. E. Willis	1	35-26-37	11-8-38	7,792	38,340*	10,130	70,930		81,060		12.50	87.50
Stanolind	Farnsworth	1-C	4-26-37	10-13-39		423,164		782,900		782,900		0	100.00
"	"	2-C	4-26-37	12-19-39		395,320		731,300		731,300		0	100.00
"	L. L. Gregory	1-B	15-26-37	6-12-39		483,815		895,100		895,100		0	100.00
The Texas Co.	C.C. Cagle	(a)	9-26-37	1-8-29	-	18,545,440	-	34,310,000		34,310,000		0	100.00
"	"	(a)	9-26-37	7-14-38	-	4,238,597	-	7,841,000		7,841,000		0	100.00
"	"	(b)	15-26-37	1-2-36	-	8,570,007	-	15,860,000		15,860,000		0	100.00
"	"	(b)	15-26-37	1-19-38	143	1,131,753	186	2,094,000		2,094,186		.01	99.99
"	H.G. Moberly	(b)	21-26-37	2-26-38	163	1,183,695	212	2,190,000		2,190,212		.01	99.99
"	W.H. Rhodes	(a)	22-26-37	11-10-27	138,686	12,363,277	180,300	22,870,000		23,050,300		.78	99.22
"	"	(a)	22-26-37	6-21-37	38,507	2,015,809	50,000	3,729,000		3,779,000		1.32	98.68
"	"	(b)	27-26-37	2-13-40	5,796	6,453*	7,530	11,900		19,430		38.75	61.25
"	State of N.M.	"Y"	16-26-37	2-5-40	-	272,279	-	503,700		503,700		0	100.00
TOTALS		14			193,880	52,065,036	251,988	96,324,830		96,576,818		.26	99.74

*Gas-Oil ratio shown on July, 1940, Lea County Operators Committee Engineering Report used in computing these volumes.

Note: Geo. F. Getty-Riggs A-1 completed 4/10/38, Sec. 1, Twp. 26-S, R-37-E, and Ohio-State #1 completed 7/9/39, Sec. 2, Twp. 26-S, R-37-E, are small oil wells in Northeast corner of Rhodes Field but are not producing from same reservoir as rest of wells in Rhodes Field and are, for this reason, not included in above tabulation.

AEW-JRH - 8-26-40



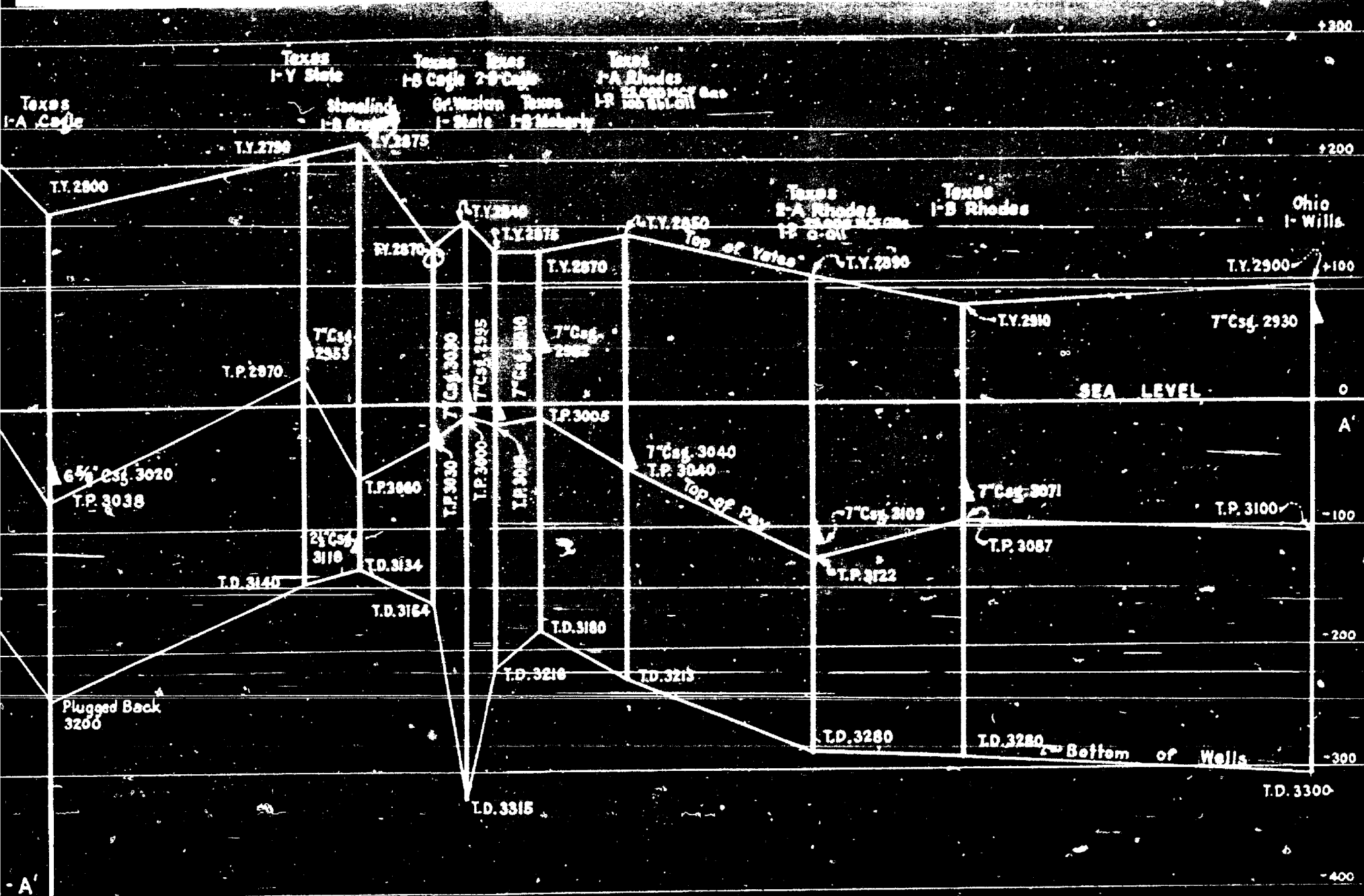


Exhibit III (a)

Contoured on top of Yates Sand
(Contour interval = 50')
Scale: 1" = 4000'

Leases owned by The Texas Company colored or bordered in yellow

B——B' Line of NE-SW Cross Section (See Exhibit III (b))

GEOLOGY OF THE RHODES GAS FIELD
Township 26 South, Range 37 East
Lea County, New Mexico

The area known as the Rhodes Gas Field is located in southeastern Lea County, New Mexico. It lies mainly within the western portion of the east twenty-four sections of Twp. 26-S, Rge. 37-E, and does not extend beyond the limits of these sections. Gas has been the principal product produced from the field, although a few of the wells have produced small amounts of oil. Geographically the field is located near the western extremity of the Great Plains Country, which covers a large portion of Texas and some of the eastern portion of New Mexico.

The formations from which the gas is produced are of Permian (Capitan) age. The surface is represented by a thin mantle of Tertiary beds with Caliche at the top underlain by sands and clays. Underlying the Tertiary are "Red Beds" and sand of Triassic age. These are in turn underlain by Permian beds which are present at a depth of approximately 700 feet.

The producing area is located on the west flank of a regional structure located in Texas and New Mexico and known as the Central Basin Platform of the Permian Basin. While the gas production is closely adjacent to the axis of this large structural feature, the main structural feature itself is not the controlling factor in the distribution of the gas. The local structure in the area of the gas production is represented by a fairly uniform southwest flank dip averaging approximately 200 feet to the mile. The strike of the formation is approximately North 40° West.

While the regional structure previously mentioned is considered to be responsible for the gas accumulation, the present location of the gas reservoir is controlled to a large extent by the lithology of the formations comprising the reservoir. At the time of the deposition of the formations forming the reservoir a large barrier reef was known to exist not far west of the present producing area. The position of this reef and its continuation in a northwest-southeast direction were the influencing factors controlling the type of sediments found in the gas area and were the reason for the great variation in the lithology of the formations in an east-west direction and to a lesser extent in a north-south direction. While sandstones and limestones were being deposited on the eastern lagoonal flank of the reef out to certain depths, anhydrite and other sediments forming impervious beds were being deposited at a greater distance from the reef. The transition of the sediments in an eastward direction from coarse dolomites and sandstones to impervious anhydrites and impure dolomites is the controlling factor determining the northeastward extent of the present gas reservoir.

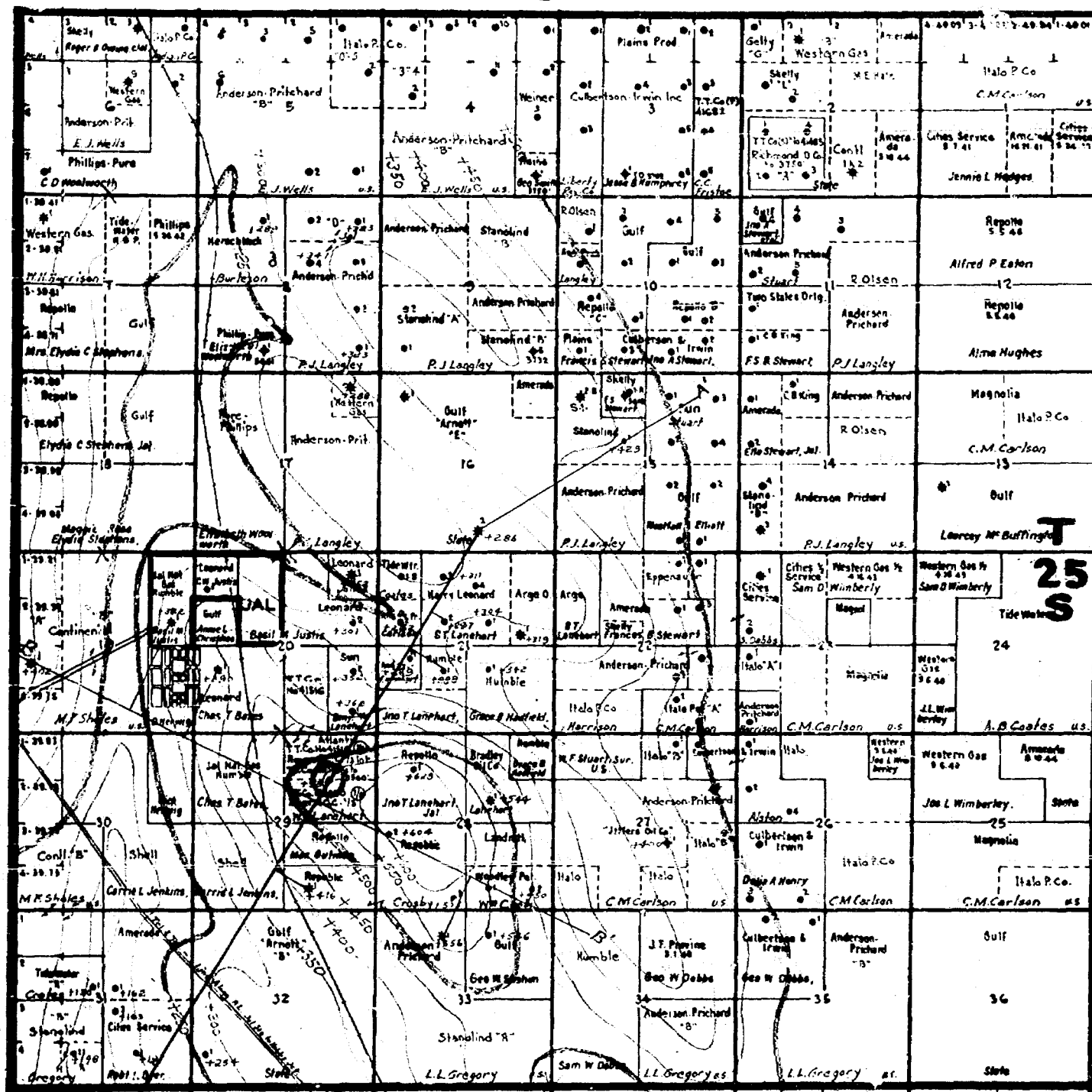
Studies made from the examination of well samples show erratic changes in the types of sediments over short distances and several hundred feet of sand is known to grade into impervious dolomite in a distance of one-quarter mile or less. The presence of alternating sands and dolomites, not to mention the occurrence of some anhydrite beds in the upper portion of the gas horizon and the gradation of these formations into each other, makes it diffi-

cult to carry stratigraphic correlations accurately. This is particularly true of the formations producing the gas, since the sediments necessary to the formation of the porous reservoir are those having the more erratic characteristics. Because of the transitional nature of the sediments in the area of the gas reservoir most correlation work in the area must be confined to the Top of the Yates horizon which overlies the main porous zones of the reservoir.

As borne out by production figures, most of the reservoir area contains gas, although lower on the flanks of the structural feature some small oil areas are known to exist. It is probable that some of the oil area represents a thin layer of oil lying within the main gas horizon at lower levels between the gas-oil contact and the oil-water contact. Other oil areas presumably are due to the presence of isolated lenses or pockets within the gas reservoir itself. In several instances small amounts of oil are found, with gas both above and below the oil horizon.

Production figures and thicknesses of reservoir horizons substantiate the fact that the Rhodes Gas Field is principally a gas field where the value of the gas is of much greater importance than the value of the small amounts of oil known to be present in scattered areas throughout the field.

R-37-E



STRUCTURE MAP OF PORTION OF LANGLIE FIELD
LEA COUNTY, NEW MEXICO

Contoured on top of Yates Sand
(Contour interval = 50')

Scale: 1" = 4000' EMR - 8/13/40

Leases owned by The Texas Company colored
or bordered in yellow

○ The Texas Company wells for which exemption
to gas-oil ratio order is requested

A——A' Line of NE-SW Cross Section (See Exhibit III (a))

B——B' Line of SW-NW Cross Section (See Exhibit III (b))

OIL CONSERVATION COMMISSION

Case #21, 22, 23.

September 19, 1940

Mr. G. H. Card
Stanolind Oil & Gas Company
Fair Building
Fort Worth, Texas

Re: Case #21, for the purpose of considering the adoption of final gas-oil ratio orders for the various producing fields in New Mexico.

Re: Application of Stanolind Oil & Gas Company for exemption from proposed permanent gas-oil ratio order for Lea County for five wells located in the Eaves, Rhodes, and Langlie Fields - amendment to said application.

My dear George:

Reference is made to your letter of September 4, wherein you make amendment to your application referred to in the caption.

Your letter, as an application for such amendment, is being filed with your original application in order that the application and amendment may be considered together by the Commission after a permanent gas-oil ratio order is issued for Lea County and the question of exemptions from such order comes up for action by the Commission.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik

C
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P
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STANOLIND OIL AND GAS COMPANY

FAIR BUILDING

FORT WORTH, TEXAS

September 4, 1940

File: GHC-2809-254.007

Subject: Exemption from Gas-oil Ratio
Order

RECEIVED
STATE LAND OFFICE

SEP 6 12 59 PM '40

SANTA FE, N. M.

Honorable New Mexico Conservation Commission,
Santa Fe, New Mexico.

Gentlemen:

Kindly refer to our letter of August 9, file GHC-2523-254.007, in which we requested exemption from the proposed permanent gas-oil ratio order for Lea County for five of our wells in the Eaves, Rhodes, and Langlie Fields. There are two errors in the detailed history of these wells which were attached to our letter.

In the history of Farmsworth C-2, the 2½" tubing is shown as set at 3869 feet. This should be "2869" feet.

In the history of Gregory "C" No. 1, the 2½" tubing is shown as set at 3237 feet. This should be "3162" feet.

Yours very truly,

STANOLIND OIL AND GAS COMPANY

J. H. Moyer

By

J. H. Cord

GHC/ab

STANOLIND OIL AND GAS COMPANY

FAIR BUILDING

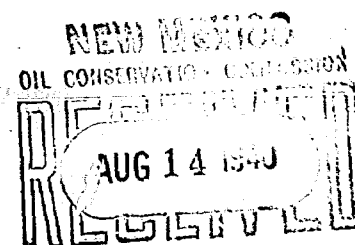
FORT WORTH, TEXAS

August 9, 1940

File: GHC-2523-254.007

Subject: Exemption from Gas-oil Ratio
Order

Hon. New Mexico Conservation Commission,
Santa Fe, New Mexico.



Gentlemen:

As provided in the proposed permanent gas-oil ratio order for Lea County, New Mexico, we respectfully request exemption for the following of Stanolind Oil and Gas Company's wells:

<u>Well</u>	<u>Area</u>
Farnsworth B-3	Eaves
Farnsworth C-1	Rhodes
✓ Farnsworth C-2	Rhodes
Gregory B-1	Rhodes
✓ Gregory C-1	Langlie.

We are attaching a detailed history of each of the above wells, and in addition are attaching a plat showing their location. The wells for which exemption is requested are encircled in red.

An examination of the attached data will disclose that each is a gas well, and is delivering gas to the El Paso Natural Gas Company. You will also note that this group of wells is located in the Southern part of Lea County in a relatively small area.

Ever since production was first obtained in this area, gas has been the chief product produced, and it is generally considered to be primarily a gas area. All of this information can be substantiated by your records.

We are, therefore, of the opinion that the proposed per-

New Mexico Conservation Commission,
Santa Fe, New Mexico.

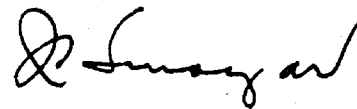
-2-

August 9, 1940
File: GHC-2523-254.007

permanent gas-oil ratio order for Lea County is not applicable to these wells. For this reason complete exemption from the order is respectfully requested.

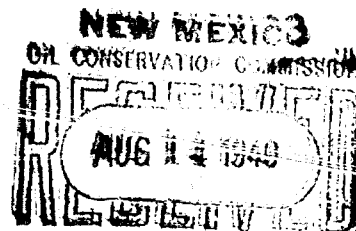
Yours very truly,

STANOLIND OIL AND GAS COMPANY



J. H. Moyer

cc CGS



Stanolind Oil and Gas Company

C. M. Farnsworth "B" No. 3

Eaves Field

Elevation 2959'

Location: NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 7, T. 26S, R. 37E

Spudded June 1, 1938

Completed June 28, 1938

Casing: 13" set at 297' with 210 sacks of cement
9-5/8" set at 1167' with 400 sacks of cement
7" set at 2705' with 250 sacks of cement

Tubing: 2 $\frac{1}{2}$ " set at 2974'

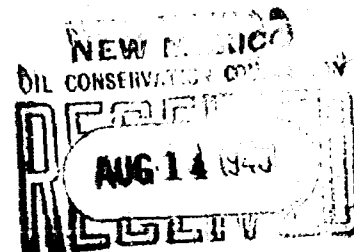
Present producing formation: Carlsbad Gas Sand

Top of Carlsbad: 2650'

Total Depth: 2995'

Potential: 10,591 MCF gas per day with no oil or water through open
2 $\frac{1}{2}$ " tubing.

Present Status: Delivering approximately 1,100 MCF gas per day to El
Paso Natural Gas Company. Also produces about 2 $\frac{1}{2}$
barrels of oil daily.



Stanolind Oil and Gas Company

Farnsworth "C" No. 1

Rhodes Field

Elevation 2983'

Location: SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 4, T. 26S, R. 37 E.

Spudded September 3, 1939

Completed October 14, 1939

Casing: 13" set at 290' with 200 sacks of cement
8-5/8" set at 1077' with 325 sacks of cement
5-1/2" set at 2774' with 100 sacks of cement

Tubing: 2-1/2" set at 3038'

Present producing formation: Yates Gas Sand

Top of Yates: 2680'

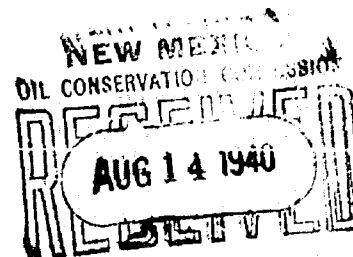
Total Depth: 3160'

Initial Production: 3,400 MCF gas through open 2-1/2" tubing

Casing perforated with 16 shots from 2695' to 2710' and 40 shots from 2710' to 2730'.

Potential: 4700 MCF gas per day with no oil or water through open 2-1/2" tubing.

Present Status: Delivering approximately 2,000 MCF gas per day to El Paso Natural Gas Company.



Stanolind Oil and Gas Company

Farnsworth "C" No. 2

Rhodes Field

Elevation 2989'

Location: SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 4, T. 26S, R. 37 E.

Spudded 11-14-39

Completed 12-19-39

Casing: 13" set at 294' with 225 sacks of cement
8-5/8" set at 1098' with 300 sacks of cement
5 1/2" set at 2479' with 150 sacks of cement

Tubing: 2 1/2" set at 3869'

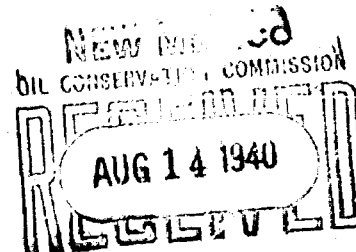
Present producing formation: Yates Gas Sand

Top of Yates: 2560'

Total Depth: 2900'

Potential: 12,004 MCF gas per day with no oil or water.

Present Status: Delivering approximately 2,500 MCF gas per day to El Paso Natural Gas Company



Stanolind Oil and Gas Company

Gregory "B" No. 1

Rhodes Field

Elevation 3000'

Location: SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 15, T. 26S, R. 37 E.

Spudded May 10, 1940

Completed June 9, 1940

Casing: 13" set at 272' with 200 sacks of cement
9-5/8" set at 1103' with 350 sacks of cement
7" set at 2945' with 100 sacks of cement

Tubing: 2 $\frac{1}{2}$ " set at 3116'

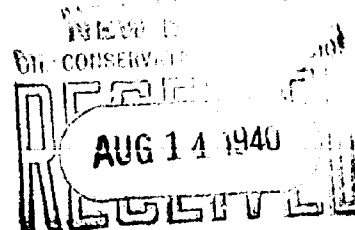
Present producing formation: Yates Gas Sand

Top of Yates: 2605'

Total Depth: 3134'

Potential: 3,712 MCF gas per day with no oil or water through open
2 $\frac{1}{2}$ " tubing.

Present Status: Delivering approximately 1,200 MCF gas per day to El
Paso Natural Gas Company



Stanolind Oil and Gas Company

Gregory "C" No. 1

Langlie Field

Elevation 3016'

Location: NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 33, T. 25 S, R. 37 E.

Spudded August 8, 1937

Completed September 19, 1937

Casing: 13" set at 256' with 250 sacks of cement
9-5/8" set at 2353' with 500 sacks of cement
7" set at 3098' with 150 sacks of cement

Tubing: 2 $\frac{1}{2}$ " set at 3237'

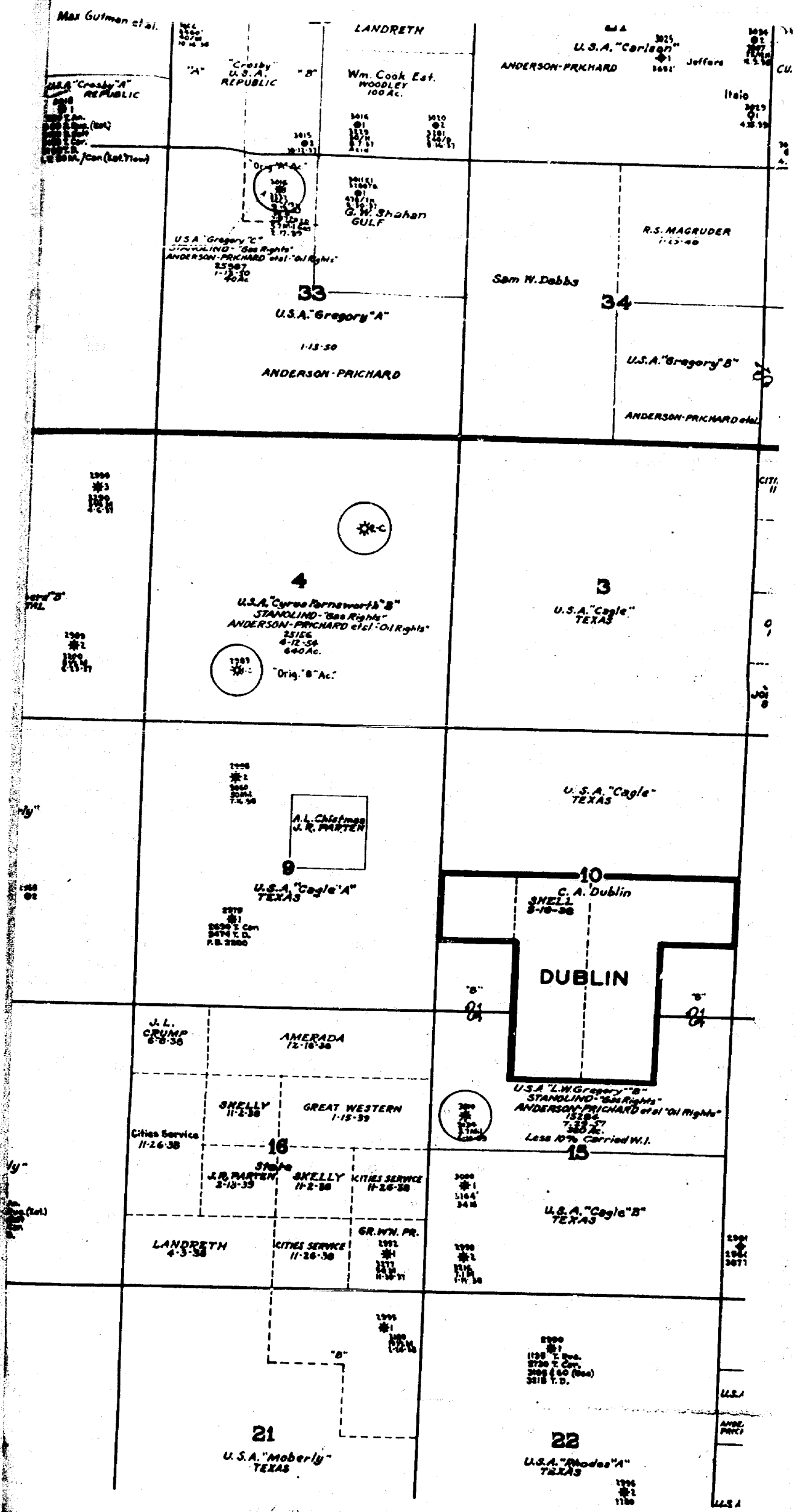
Present producing formation: Yates Sand and Upper Shipley

Original Total Depth: 3237' Present Total Depth: 3190'

Original Potential: Flowed 266 Barrels of oil in 19 hours with 1,000 MCF gas.

History of Remedial Work: Water encroached rapidly. 246' of 5 $\frac{1}{2}$ " liner was set and cemented from 2977' to 3223'. Liner gun perforated 3195' to 3199'. Hole filled with water. Cleaned out to total depth, 3237', and tested below liner perforations with hockwall packer on tubing. Tested 15 to 25 barrels of fluid per day, 1% oil. Liner then perforated 3117' to 3189' to open up gas pay. Tested 20 barrels of water per day with 150 MCF gas. Set Baker cement retainer at 3190' and squeezed in 100 sacks of cement. Acidized gas pay 3125' to 3135' with 1500 gallons. Flowed 250 MCF gas per day. Perforated casing from 2450' to 2530', 2560' to 2650', 2680' to 2730', 2850' to 2950' and 3020' to 3080'. First increase in gas came at 2700'. Tested 5,000 MCF dry gas through open tubing and 3,300 MCF flowing against 600# back pressure.

Present Status: Delivering approximately 1,200 MCF gas per day to El Paso Natural Gas Company. Also, producing 10 barrels of fluid per day, 70% oil.



OIL CONSERVATION COMMISSION

August 8, 1940

C
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Y
Mr. C. P. Dimit, Vice-President
Phillips Petroleum Company
Bartlesville, Oklahoma

My dear Mr. Dimit: Re: Case No. 21, Gas-Oil Ratios.

Reference is made to your letter of August 5,
which will be brought to the attention of the Com-
mission.

It is especially noted that you desire that the
exemptions granted on the C. D. Woolworth Lease in the
Cooper Field be continued under whatever other final
gas-oil ratio order is adopted.

Please remember me very kindly to Mr. Hayes McCoy
of your Legal Department.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:lk

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PHILLIPS PETROLEUM COMPANY

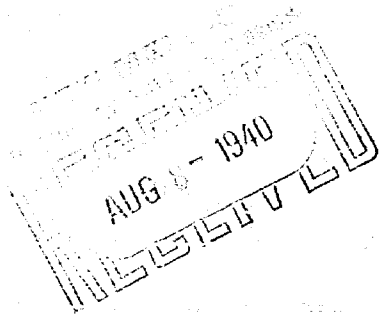
BARTLESVILLE, OKLAHOMA

August 5, 1940

PRODUCING DIVISION

C. P. DIMIT
VICE-PRESIDENT

D. R. KNOWLTON
PRODUCTION MANAGER



In re: Gas-Oil Ratio Rules

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Attention of Mr. Carl B. Livingstone, Attorney

Gentlemen:

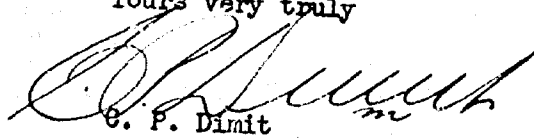
We would like to endorse and recommend the adoption of the suggested general gas-oil ratio rules as presented to you on July 29 by the Lea County Operators Committee. It is felt that rules of this nature certainly stand for better conservation and result in a more effective use of reservoir energy.

On April 8, 1940, we submitted an application supported by affidavit for exception to gas-oil ratio Order No. 250, insofar as it applied to our C. D. Woolworth Lease in the Cooper Field. This exception was granted and is still in effect under the present order.

The reasons for such exception were set out in detail in the application. The actual condition of this lease has not changed materially since April. Therefore, if a new order is to be written, we would like to urge that this lease continue to be exempt for the same reasons.

We will be glad to furnish any additional information if needed.

Yours very truly



C. P. Dimit

CPD DMz

TWO STATES OIL COMPANY

DALLAS, TEXAS

August 7, 1940

Mr. A. Andreas, State Geologist
New Mexico Oil Conservation Commission
Santa Fe, New Mexico

RE: Appeal for exception to order issued
in lieu of Gas-Oil Ratio Order No. 250
Two States Oil Company, Kaseman, et al,
Stuart No. 1 well, NW SW 11-25S-37E,
Langlie Field, Lea County, New Mexico.

Dear Mr. Andreas:

Herewith, we are forwarding to you, by registered mail, our appeal for an exception to the order as proposed at the hearing of July 29, 1940. We believe that the petition is complete, in that we have supported all of our statements and information with affidavits by qualified persons. It is our hope that you will be able to consider this application as a part of the information presented at the hearing and will be able to make the exception which we are requesting a part of the order itself. As you are aware, this application is made for the reason that we felt, with regard to certain specific areas, there was not enough consideration given in the operators' investigation to guarantee complete protection to all owners.

It has been our plea, from the beginning, that the gas-oil ratio order, as proposed, should be very carefully worked out for the reason that results may possibly be obtained through penalties which were not anticipated by the Commission itself, or by the operators.

Very truly yours,

TWO STATES OIL COMPANY

By: *Howard P. Helme*

HPH:S

Encls.

TWO STATES OIL COMPANY

DALLAS, TEXAS

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

RE: APPEAL FOR EXCEPTION TO ORDER ISSUED IN LIEU
OF GAS-OIL RATIO ORDER NO. 250
TWO STATES OIL COMPANY, KASEMAN, ET AL,
STUART NO. 1 WELL - NW/4 SW/4 SEC. 11-25S-37E,
LANGLIE FIELD, LEA COUNTY, NEW MEXICO.

Gentlemen:

Believing that it is the Commission's intention in issuing Gas-Oil Ratio Order, in lieu of Order No. 250, to encourage or induce operators to remedy high gas-oil ratio wells by packer settings or other remedial work to reduce the waste of gas and reservoir energy to a minimum, where such work can be adequately and economically done, and that it is not the intention of the Commission to enforce work that will be damaging to production or to cause a loss of a well where such work cannot be done adequately or economically, we hereby make appeal to the Commission to make exception of the above well to the Commission Order, in lieu of Order No. 250, for reasons that:

At the completion of this well a packer was set, and could be only set with heavy mud, in the well to cut off the main gas horizon of the area, cutting off 10,000,000 plus cubic feet per day, that the well was completed with a satisfactory gas-oil ratio, but the gas has gradually increased in the oil pay, the gas-oil ratio gradually increasing until now it is in excess of the permissible ratio of the area, as cited in your Order issued in lieu of Order No. 250.

That the above packer setting cannot be moved without danger of doing considerable damage to the oil production and quite possibly releasing in the upper gas horizon of 10,000,000 plus cubic feet per day, thus making a well quite impossible to produce under Order replacing Order No. 250 with such an excessive amount of gas.

We believe that, due to the failure of other operators in the area, to separate the gas from the oil in the main pay horizon that it is practically impossible to do so in this pay and any attempt to do so in this well may result in losing the present packer setting cutting off the main gas pay, thereby releasing such gas and possibly causing material damage to the oil pay horizon.

In support of the above, we wish to present Exhibit "A" Affidavit of our Geologist, J. B. Headley, of Roswell, New Mexico, giving a complete report of the completion of the well showing the gas and oil production at the time of completion, further statement showing gas tests taken by the affiant as follows:

<u>DATE</u>	<u>GAS-OIL RATIO</u>
2-16-38	1210/1
3-19-38	1286/1
5-20-38	1333/1

These tests show the beginning of the increase in the gas-oil ratio.

Exhibit "B", Affidavit of our Production Superintendent, R. S. Gaston, of Eunice, New Mexico, showing gas tests taken by him as follows:

<u>DATE</u>	<u>GAS-OIL RATIO</u>
11-20-38	2584/1
12-19-38	2727/1
2- 7-39	3455/1
3- 7-39	3275/1
4- 4-39	4240/1
1-21-40	8696/1
2-29-40	15800/1
5- 8-40	12308/1
7- 8-40	13333/1

These findings show the gradual increase in the gas-oil ratio, showing the gas is increasing in the oil pay itself. Affiant further gives his opinions as to the hazard in attempting to change the packer setting.

Exhibit "C", Affidavit of our Drilling Superintendent, W. R. Hines, of Hobbs, New Mexico, in charge of the drilling of the well, showing the efforts made at the time of completion to adequately cut off excessive gas, showing this was successfully done only by using heavy mud, and the affiant's opinion as to moving the packer setting.

Exhibit "D", Affidavit of our lease man, John Curtiss, of Jal, New Mexico, showing that in his belief from pressure read on the casing gauge that the present packer setting is holding, shutting off the gas in the main gas horizon; that it is his belief that the present increase in gas is in the oil pay itself, and his opinion as to changing the packer setting.

This appeal for an exception to your proposed order, which will take the place of Gas-Oil Ratio Order No. 250, is made at this time in view of the fact that the writer was present at the hearing in Santa Fe, on July 29, 1940, at which time it was suggested that any objections, by way of specific wells, should be made in writing to yourselves, on or before August 12, 1940.

We call to your attention that under the original order No. 250 we made the same appeal for exception, and the exception was granted by your letter of April 30, 1940. The affidavits in each case are identical with the ones submitted in support of that appeal for exception, and we respectfully submit, at this time, that the exception for which we pray should be granted for the same reasons used by yourselves in the first instance. We are asking that this exception be made a part of the order, for the reason that we are under the opinion that a special hearing will be necessary to establish our claim, which hearing will be an item of considerable expense to ourselves and will, also, take the time of our Company and yourselves, as Commissioners.

Very truly yours,

TWO STATES OIL COMPANY

By Howard P. Holmes
President.

A F F I D A V I T

STATE OF NEW MEXICO)
 (SS
 COUNTY OF CHAVES)

Comes now J. B. Headley, who being first duly sworn,
 upon his oath states:

That he was employed by the Two States Oil Company in
 charge of designing and completing an oil well known as Two States Oil
 Company, Keseman, et al, Stuart No. 1, located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section
 11, Township 25 South, Range 37 East, Langlie Field, Lea County, New Mexico;

That attached hereto and made a part hereof is his com-
 pletion report of said well, and that said report is true and correct to his
 best knowledge and belief;

That he witnessed the completion work on this well to-
 gether with the packer settings, including the first setting at 3320 feet,
 which failed, and the second packer setting at 3317 feet which was success-
 ful, due to the heavy mud on top of the packer, thereby cutting off 10,000,000
 plus cubic feet of gas per day;

That in his opinion any attempt to change or alter the
 present packer setting is quite likely to endanger the oil pay and release
 the upper excessive gas, and another packer setting may not successfully
 shut off this gas, and that in his opinion it is practically impossible to
 separate the lower gas from the oil.

That he took gas measurements on the well subsequent to
 the completion as follows:

<u>Date</u>	<u>Gas-Oil Ratio</u>
2-16-38	1210/1
3-19-38	1286/1
5-20-38	1333/1

J. B. Headley
 Affiant

Subscribed and sworn to before me this 9th day of
 August, 1940.

Amelia M. Hartzman
 Notary Public

My Commission Expires

January 17, 1944

R E P O R T

TWO STATES OIL COMPANY (50%)

&

GEORGE A. KASEMAN (50%)

Frances S. B. Stuart No. 1.

Location: 1650' from the south line and 330' from the west line of Section 11, Township 25 South, Range 37 East, Lea County, New Mexico, Langlie Field.

Contractor: Two States Drilling Company.

Elevation: Derrick floor (Rotary) 3121.

Spudding date: July 4, 1937.

Completed: August 4, 1937.

Pipe: 8-5/8" 224', 150 sacks cement.
5-1/2" 17# 3148', 450 sacks cement.
2" tubing upset, 3410 bottom joint perforated
packer 3317 Guiberson Spiral.

Total Depth: 3410'.

Pays: Gas: 3216-3232 - 3,360,000 dry sweet.
" 3246-3274 - estimated 10,000,000 sweet.
" 3274-3317 - possible increase.

Oil: 3332-3338
3342-3354
3390-3396

Production: Estimated 1,000 barrels per day, P. L. O. natural.

The following is the drilling time beginning under the 5 1/2" pipe:

Depth:	Time:
3166	30
68	25
70	25
72	25
74	18
76	20
78	17
80	22
82	30
84	25
86	30
88	20
90	17
92	22
94	15
96	14
98	14
3200	15
02	15
04	15
06	18
08	20
10	22
12	20
14	35
16	35
18	15

Depth:

Time:

3220	10
22	15
24	10
26	10
28	15
30	10
32	15
34	30
36	27
38	23
40	38
42	22
44	35
46	25
48	20
50	20
52	20
54	20
56	10
58	8
60	12
62	10
64	10
66	20
68	10
70	15
72	15
74	15
76	30
78	30
80	34
82	69
84	60
86	80
88	60
90	28
92	40
94	45
96	55
98	40
3300	27
02	15
04	30
06	58
08	45
10	40
12	35
14	60
16	40
18	35
20	40
22	30
24	25
26	25
28	35
30	35
32	30
34	10
36	15
38	15
40	45
42	47
44	05
46	03
48	08
50	12
52	16
54	19
55	13
56	20
58	60
60	60
62	40
64	30

Depth:	Time:
3366	40
68	40
70	50
72	40
74	40
76	40
78	35
80	40
82	63
84	23
86	40
88	30
90	30
92	22
94	15
96	13
98	25
3400	30
02	28
04	38
06	30
08	25
10	24

Total Depth 6:30 P. M.
August 1, 1937.

The following is the driller's log:

0-990 Redrock, sandstone, caliche
1130 Anhydrite
1140 Shale
1258 Shale and anhydrite
1288 Anhydrite
1360 Anhydrite and salt
1425 Anhydrite
1871 Anhydrite and salt
1890 Salt
2013 Anhydrite
2312 Anhydrite and salt
2393 Anhydrite
2404 Brown lime
2426 Anhydrite
2925 Brown lime
3040 Lime
3074 Broken lime - show of gas
3150 Lime
3266 Lime - show of gas
3277 Sandy lime
3336 Lime
3377 Broken lime
3410 Lime - T. D.

The following are formation tops picked by me from cuttings:

Top anhydrite:	1020
Top salt:	1288
Base salt:	2312
Top brown lime:	2350
Sandy section:	3180
Top of pay	3332

On July 23rd, 1937, 3148' 5 1/2" O. D. pipe was set with 450 sacks cement. On July 27th pipes tested with 1,000# pressure and found to be okay. Plug drilled and drilling continued. On July 28th at total depth 3245 test was made through drill pipe testing 3,380,000 cu. ft. dry sweet gas. On July 30th at total depth of 3355 feet tested through 2" tubing, estimated 10,000,000 ft. of gas with spray of oil and through casing the same. On August 1st, the total depth (final) 3410 with packer (rubber) at 3320 perforations below test ten million cubic feet gas with spray of oil.

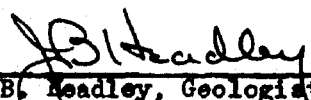
Mud in casing was unloaded and evidence was such that packer was not holding. On August 3rd, set Guiberson Spiral packer at 3317 perforations below and mud was left in the casing. On August 4th tubing was swabbed and production allowed to flow into pits testing 107½ barrels pipeline oil in seven hours, with estimated 100,000 cubic feet gas per day. On August 8th tested in tanks 22½ barrels pipeline oil through 23/64 choke on tubing. On August 9th tested in tanks 189 barrels pipeline oil through 23/64 choke on tubing. On August 10th tested 125 barrels pipeline oil through 10/64 choke on tubing.

The gravities observed were:

43 degrees	at 92 degrees temp.
43.8 "	at 81 " "
43.7 "	at 71 " "
42.7 "	at 60 " "

Well put on proration schedule August 16th, 1937. Shell Pipeline Company is the purchaser of the production.

Respectfully submitted,


J. B. Headley, Geologist.

A F F I D A V I T

STATE OF NEW MEXICO)
) SS
 COUNTY OF LEA)

Comes now R. S. Gaston, who upon his oath states:

That he is Production Superintendent for Two States Oil Company; that said Company drilled to completion a well known as the Two States Oil Company, Kaseman, et al, Stuart No. 1, located in the NW/4 SW/4 Section 11, Township 25 South, Range 37 East, Lenclie Field, Lea County, New Mexico; that said Company has always been and is now the operator of said well:

That he was present at the time of the completion of said well and witnessed the first packer setting, which was unsuccessful in shutting off the upper gas pay, and also the second packer setting which successfully shut off the gas pay due to the heavy mud being put on top of the packer; that said well was then completed with a satisfactory gas-oil ratio;

That since completion of said well the gas-oil ratio has gradually increased, showing the gas is increasingly in the oil pay itself, and in his opinion cannot be successfully separated from the oil in the pay horizon; that any attempt to change or alter the present packer setting would result in the loss of the present gas shut off and likely to endanger the oil production in the oil pay;

That the gas tests taken by him are as follows:

Date	Gas-Oil Ratio
11-20-38	2584/1
12-10-38	6727/1
2- 7-39	3455/1
3- 7-39	3275/1
4- 4-39	1210/1
1-21-40	8696/1
2-29-40	15800/1
5- 8-40	12708/1
7- 8-40	13333/1

R. S. Gaston
 Affiant

Subscribed and sworn to before me this 4 day of
 August, 1940.

My Commission Expires:

Joseph H. Bowden
 Notary Public

Jan - 23, 1943

AFFIDAVIT

STATE OF NEW MEXICO)
(SS
COUNTY OF LEA)

Comes now W. R. Hines, who upon his oath states:

That he is Drilling Superintendent for Two States Drilling Company in charge of the drilling of a well known as Two States Oil Company, Koseman, et al, Stuart No. 1, located in the NW 1/4 SW 1/4 Section 11, Township 25 South, Range 37 East, Lonelle Field, Lea County, New Mexico;

That said well was completed August 4, 1937, at a total depth of 3430 feet; that said well was tested at the time of completion and tested 107 1/2 barrels of oil in 7 hours, with 100,000 cubic feet of gas per day, thereby being completed with a satisfactory gas-oil ratio.

That before said well was finally completed gas horizons were encountered at 3216-3232, 3,380,000 cubic feet of gas; 3246-3274, 10,000,000 cubic feet of gas; 3274-3317 slight increase of gas, all horizons making more than 10,000,000 cubic feet combined. That attempt was first made to set a packer to cut off the gas at 3320 feet and that this packer setting was unsuccessful, it being impossible to make this packer hold. That a second packer setting was made at 3317 feet and to make it hold it was set in heavy mud, the mud was swabbed out below the packer and left remaining above the packer, making this packer setting successful, and that it did and still does cut off the upper gas horizon.

That in his opinion this packer cannot be altered or moved without releasing the upper gas and possibly endangering the oil horizon. That it is quite impracticable, if not impossible, to make another packer setting again cutting off the upper gas and also reducing the gas in the oil pay horizon.

W. R. Hines
Affiant

Subscribed and sworn to before me this 7 day of
August, 1940.

Joseph H. Bowen
Notary Public

My commission expires:

Jan, 23, 1943

A F F I D A V I T

STATE OF NEW MEXICO)
(SS
COUNTY OF LEA)

Comes now John Curtiss, who upon his oath states:

That he is employed by Two States Oil Company as lease man in charge of the production and switching on a well known as the Two States Oil Company, Kaseman, et al, Stuart No. 1, located in the NW 1/4 SW 1/4 Section 11, Township 25 South, Range 37 East, Langlie Field, Lea County, New Mexico. That he has been in charge of the production of said well since its completion. That said well in its early life had a satisfactory gas-oil ratio but that it has gradually increased in gas during the past 15 months until at present its gas-oil ratio is in excess of the permissible ratio of Gas-Oil Ratio Order issued in lieu of Order No. 250.

That in his opinion the increasing gas is due to gas increase in the oil pay itself, and in his opinion said gas cannot be satisfactorily separated from the oil in the pay; that the present packer setting is still good and holding by evidence of readings taken on the casing gauge; that in his opinion the packer setting cannot be changed or altered without releasing the upper gas and endangering the oil pay; that another packer setting is not likely to be successful in cutting off the upper gas and the gas in the oil pay;

That he has been in charge of other wells in the Langlie Field for the past five years and from his experience and observation gas is increasing in the oil sand in the entire area; and that it is practically impossible to separate this gas from the oil in the oil pay.

J. H. Curtiss

1940.

Subscribed and sworn to before me this 9 day of August,

Laughlin Boulden
Notary Public

My commission expires:

Jan, 23, 1943



CONTINENTAL OIL COMPANY

Hobbs, New Mexico
August 11, 1940

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Attention: Mr. A Andreas

Gentlemen:

We are enclosing completion data and information relative to the present producing conditions of the following three shut in gas wells:

State A-2 #1	Sec. 2-25-37
State E-17 #4	Sec. 17-22-36
State F-1 #1	Sec. 1-21-36

The above mentioned wells are not producing at the present time as there is no market for the gas. The enclosed data includes a complete history of each of the above wells together with charts showing the producing formation as well as the various pay zones.

We hereby respectfully request that these wells be exempted from the provisions of the proposed final order

N.M.O.C.C. -2
8-11-40

of the New Mexico Oil Conservation Commission governing gas/
oil ratios in the various producing fields in New Mexico.

Respectfully submitted,



H. L. Johnston
Superintendent N. M. Dist.
Texas-New Mexico Division
Production and Drlg. Dept.

EPK-IGN

Enc

cc: Mr. Gleen Staley
Mr. H. B. Simcox

State A-2 #1

Continental Oil Company's State A-2 #1 was spudded on 7-29-39 and drilled to a total depth of 3624 with rotary tools. After being acidized with a total of 11,000 gallons and shot with 260 quarts S.N.G., well would produce no oil. Plugged back to 3465 with cement and completed for a potential of 3,420 MCF gas daily.

Our State A-2 #1 is a shut in gas well at the present time. If a market for the gas production were available, this well could be produced. We hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-4-40
Hobbs, N.M.

Continental Oil Company

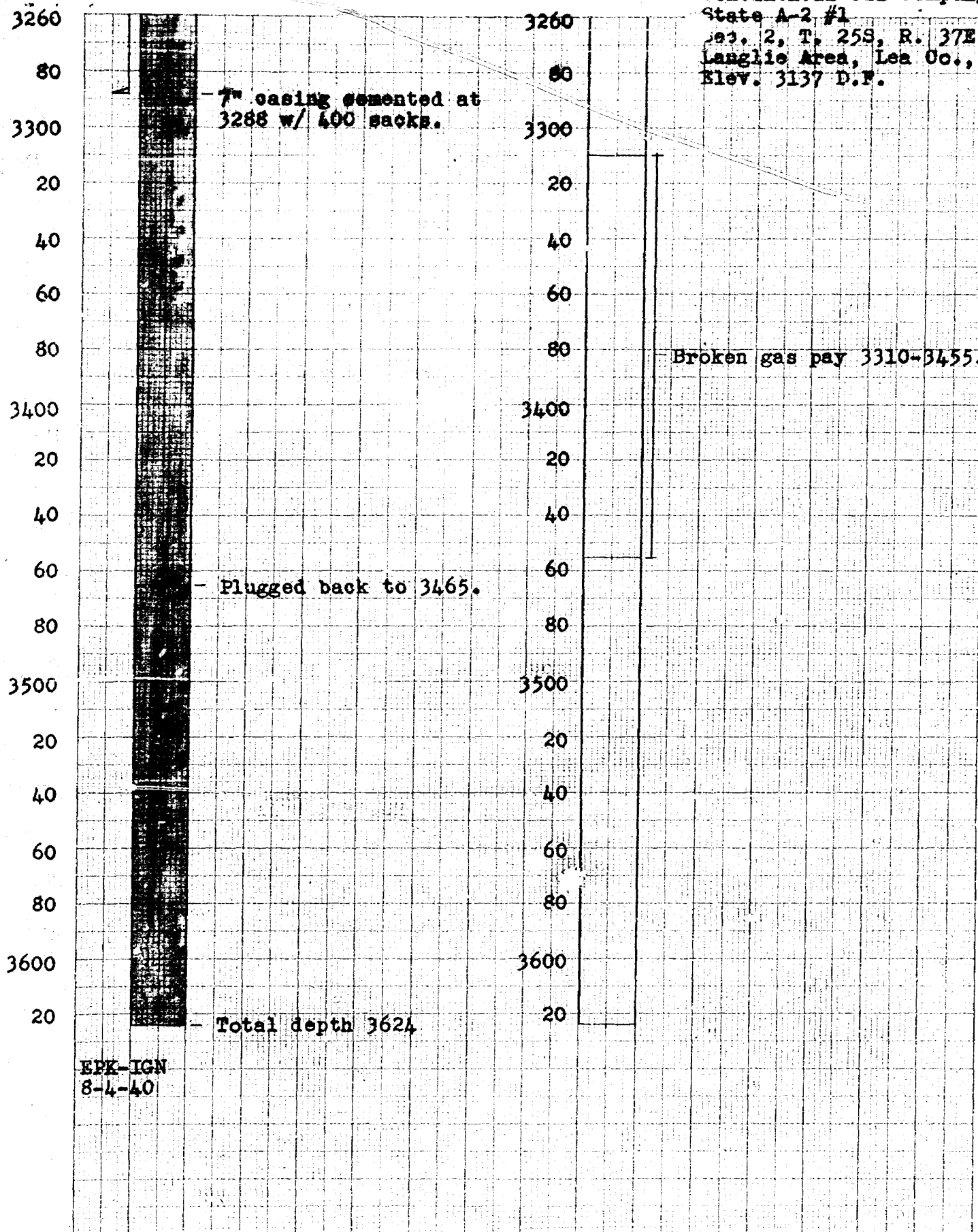
State A-2 #1

Sec. 2, T. 25S, R. 37E

Langlie Area, Lea Co., N.M.

Elev. 3137 D.F.

Section 1, New York, N.Y.



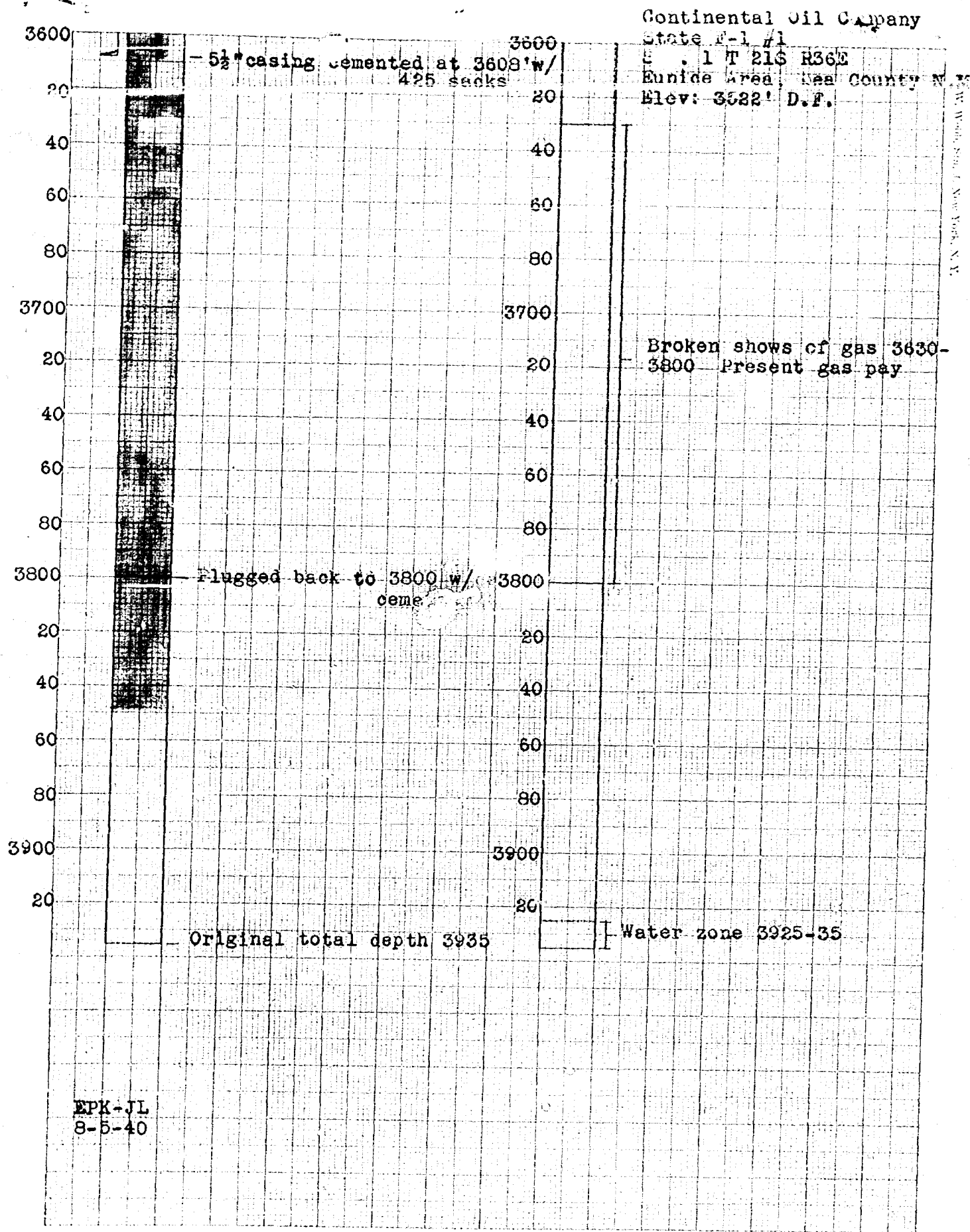
State F-1 #1

Continental Oil Company's State F-1 #1 was spudded on 1-27-38 and drilled to a total depth of 3935 with rotary tools. The 5½" casing was cemented at 3608 with 425 sacks.

At a depth of 3836' tested no oil or water, 175 MCF gas daily. Shot with 320 qts. from 3670' to 3836' and then flowed 4 bbls. oil in 18 hours. Deepened to 3847' and shot with 45 qts. from 3825 to 3847'. After shot tested no oil, 1940 MCF gas. Acidized with 5000 gal. from 3837' to 3847' and then tested no oil, 1040 MCF gas. Deepened to 3867' and tested no oil, 998 MCF gas. Deepened to 3910' and tested no oil, 998 MCF gas. Deepened to 3915' and tested no oil, 998 MCF gas. Deepened to 3935' and flowed 65 bbls. sulphur water hourly. Plugged back to 3800 with cement and completed as a gas well with a potential of 480 MCF gas daily.

Our State F-1 #1 has been a shut in gas well since completion as there is no market for the gas. We hereby respectfully request that this well be exempted from the provision of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-JL
8-5-40



State E-17 #4

Continental Oil Company's State E-17 #4 well was spudded on 4-7-38 and drilled to a total depth of 3880 with rotary tools. The 7" O. D. casing is cemented at 3715' with 30 sacks. At total depth 3880 tested no oil or gas natural. Acidized with 1000 gal. from 3720' to 3870' and again tested no oil, gas or water. Shot with 360 qts. S.N.G. from 3783' to 3880' and then flowed 20 bbls. water in 24 hours by gas lift, no oil. Plugged back to 3851' with cement and shot with 330 qts. S.N.G. from 3751' to 3851'. Flowed 1 bbl. fluid (30% water) hourly by gas lift. Plugged back to 3817' with cement and tested 18 bbls. fluid daily (50% water) flowing by gas lift. Plugged back to 3708' with cement and perforated the 7" casing with 15 holes from 3686' - 3700', and with 5 holes from 3675' - 3686'. Completed as a gas well with a potential of 6,300 MCF gas daily.

Our State E-17 #4 has been shut in since completion as there is no market for the gas. As this well is producing from a gas reservoir, we hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

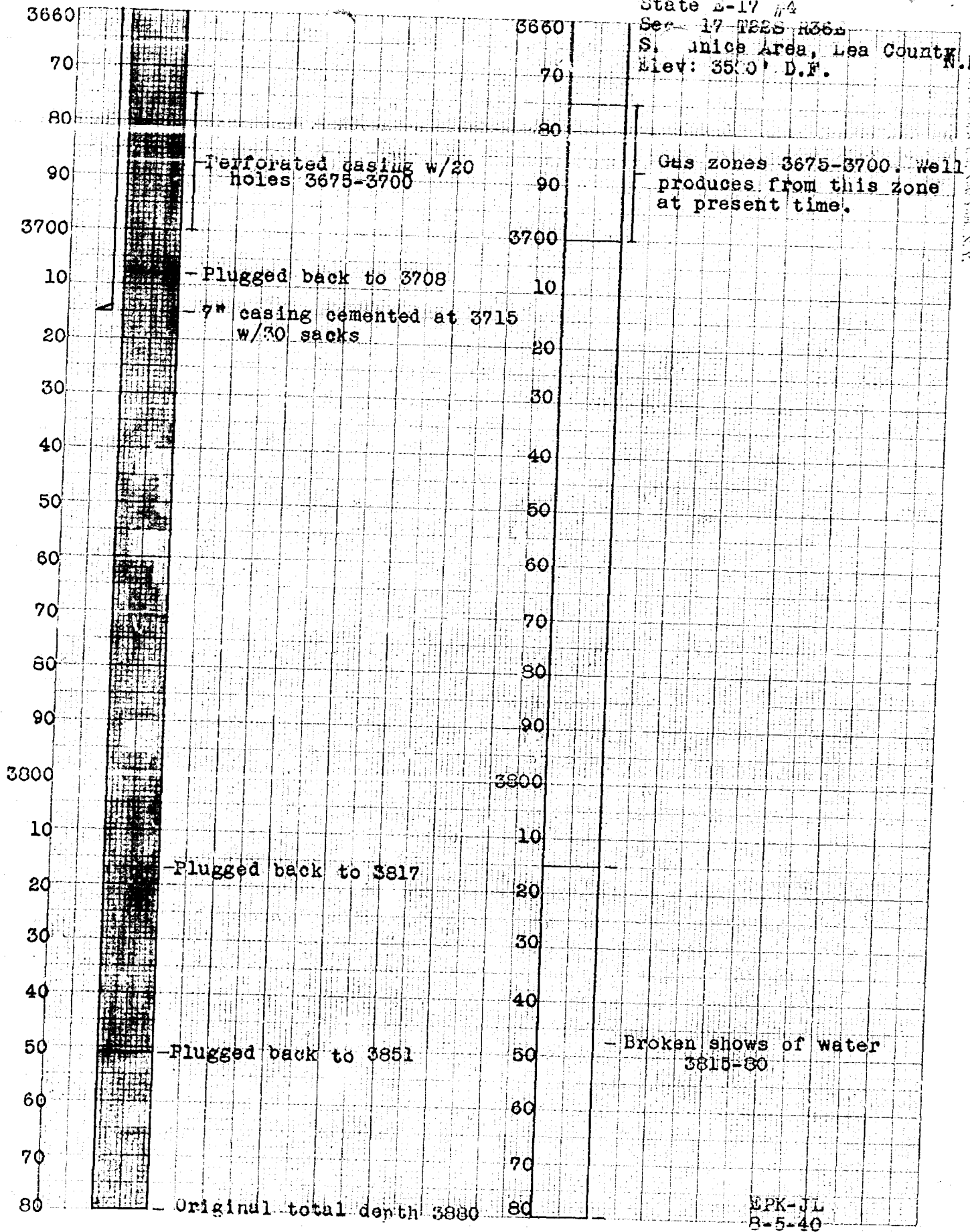
EPK-JL

8-5-40

Continental Oil Company
State 2-17 #4

Sec 17 T22S R36E

S. Unice Area, Lea County, N.M.
Elev: 3500' D.F.



Hobbs, New Mexico
August 11, 1940

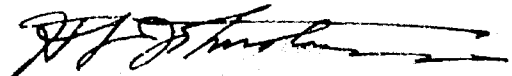
United States Geological Survey
Roswell, New Mexico

Gentlemen:

We are enclosing completion data and information outlining present producing conditions of Continental Oil Company's Britt B-10 No. 1, Sec. 10-20-37, Wells A-11 No. 1, Sec. 11-25-36, and Lockhart A-18 No. 6, Sec. 18-21-36, Lea County. After making a thorough study of the producing conditions of these wells, we have come to the conclusion that the existing gas/oil ratios cannot be corrected by remedial work.

We hereby respectfully request that these wells be exempted from the provisions of the proposed final order of the New Mexico Oil Conservation Commission governing gas/oil ratios in the various producing fields in New Mexico.

Respectfully submitted,



H. L. Johnston
Superintendent N. M. Dist.
Texas-New Mexico Division
Production and Drilg. Dept.

EPE-IGN

Enc

cc: New Mexico Oil Conservation Commission
Mr. Glenn Staley
Mr. H. B. Simeox

Britt B-10 #1

Continental Oil Company's Britt B-10 #1 well was spudded on 9-26-37 and drilled to a total depth of 3921 with rotary tools. The 5½" casing is cemented at 3679 with 425 sacks.

At a total depth of 3875, tested no oil or water. Acidized with 2,000 gallons from 3770 to 3875. After treatment, tested no oil or water, 250 MCF gas. Reacidized with 2,000 gallons from 3720 to 3875 and then tested 5 barrels fluid daily (90% B.S. and acid water) by gas lift. Shot with 300 quarts S.N.G. from 3755 to 3875. After shot, flowed 9 barrels fluid daily (50% B.S. and acid water). Reacidized with 4,400 gallons from 3750 to 3875 and then produced a slight amount of acid water, no oil. Deepened to 3890 and then flowed 2 barrels oil and 18 barrels water daily. Reacidized with 5,000 gallons from 3635 to 3890. After treatment, flowed 15 barrels fluid daily, 55% B.S. and water. Deepened to 3921 and was completed for an initial potential of 80 barrels fluid hourly (52% water) through a 3/4" choke on 2" tubing with 802 MCF gas. The well was acidized with a total of 13,400 gallons and shot with 300 quarts S.N.G..

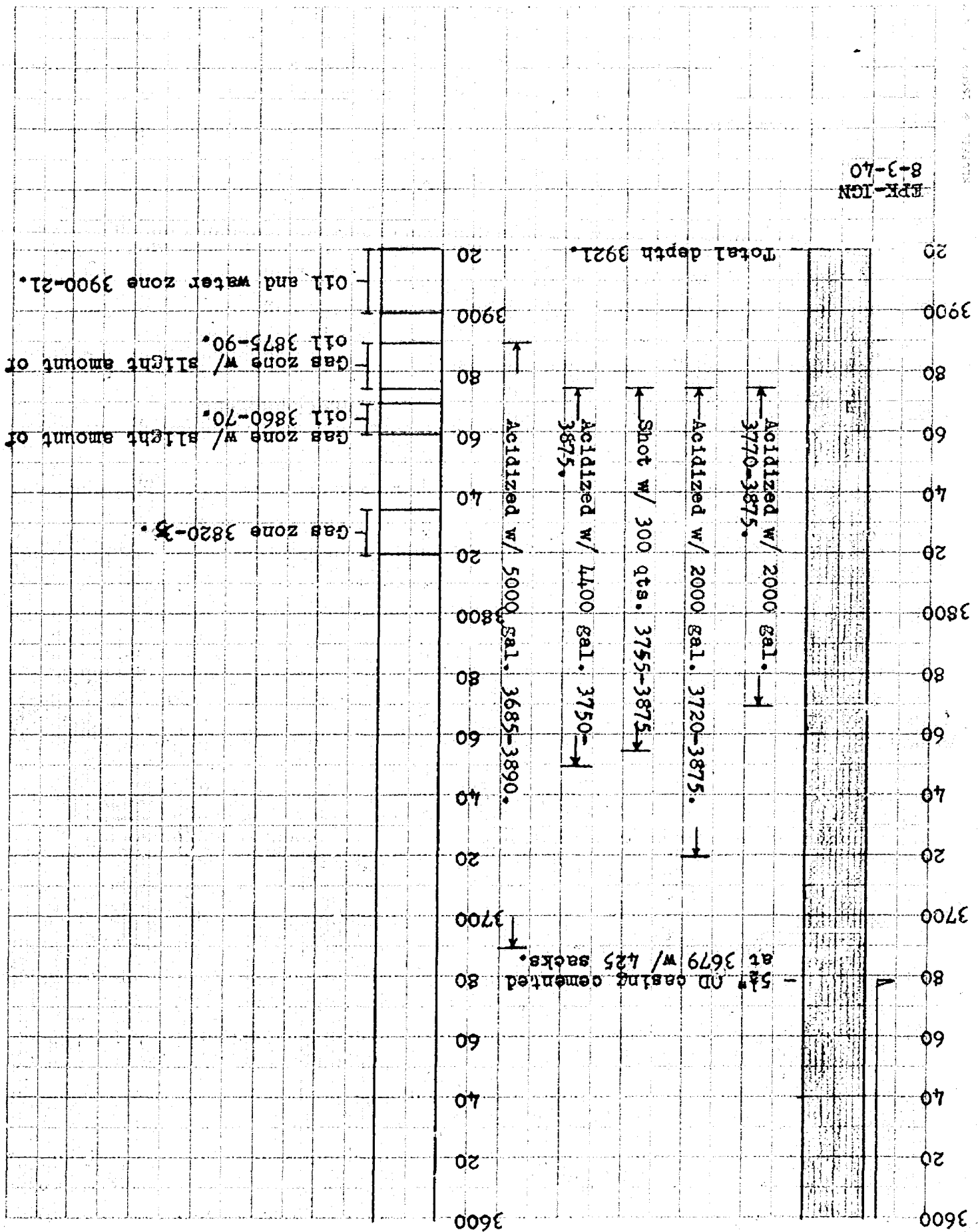
No commercial oil production was found above the zone from 3900 to 3921. Both oil and water are produced from this pay zone, and the water zone cannot be cemented off without shutting the oil pay. At the present time, the well is producing with a gas/oil ratio of 16,700 and a gas/fluid ratio of 3,400.

Page 2

As our Britt B-10 #1 well has a reasonable gas/fluid ratio and as it is impossible to seal off the water zone without shutting off our oil pay, we hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-3-40
Hobbs, N.M.

Continental Oil Company
 Pratt B-10 #1
 Sec. 10, T. 20S, R. 37E
 Monument Area, Lea County, N.M.
 Elev. 3565 D.F.



Wells A-11 #1

Continental Oil Company's Wells A-11 #1 well was spudded on 5-27-29 and drilled to the total depth of 3560 with cable tools. the 8 5/8" casing was cemented at 2959 with 300 sacks.

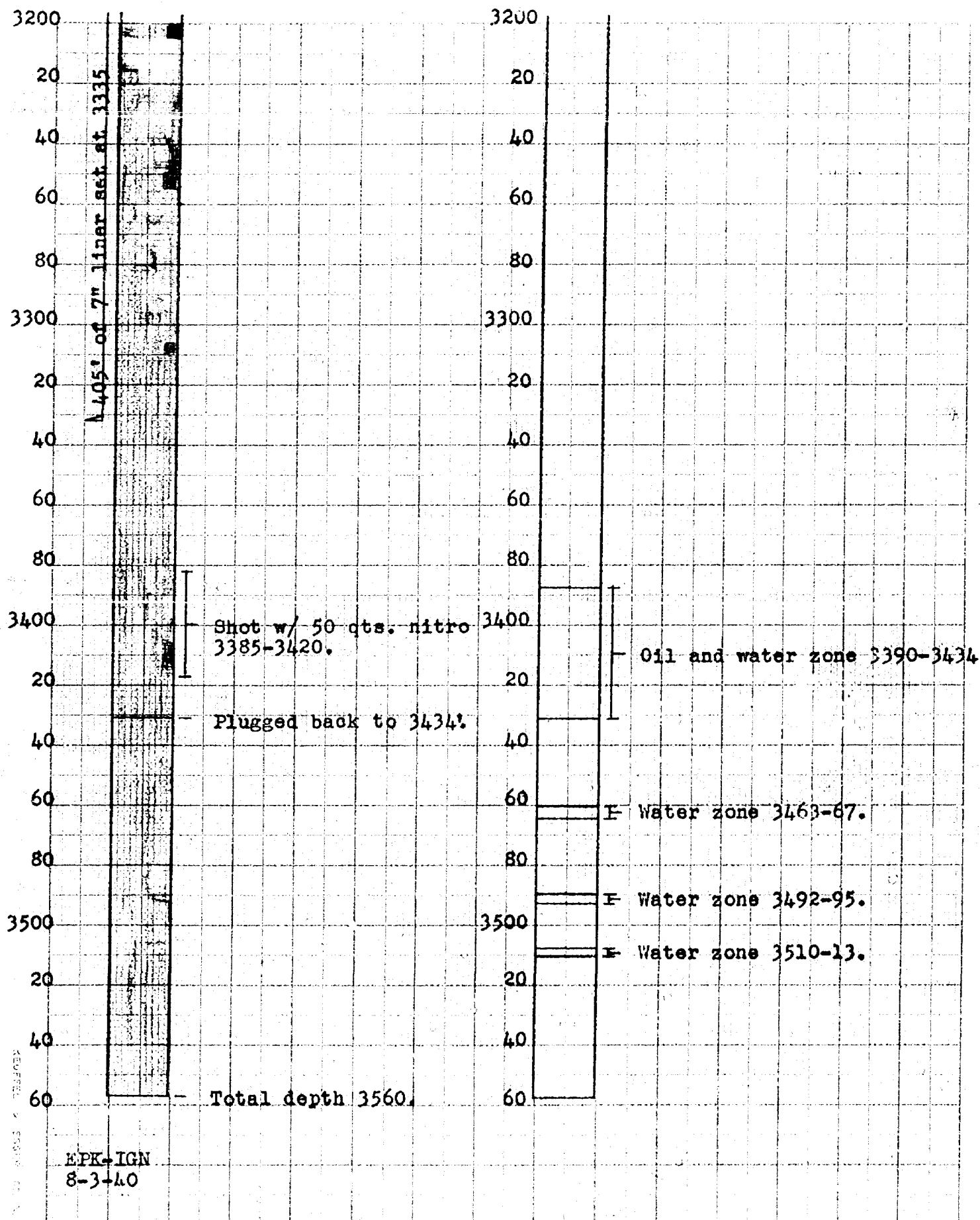
Water Zones were encountered from 3463 to 3513, and the well was plugged back to 3434. A 405' 7" liner was set at 3335 to shut off the upper gas zones. The well was then shot with 50 quarts nitro from 3385 to 3420 and completed for a potential of 160 barrels oil daily.

In March, 1934, production had declined to 18 barrels oil and 2 barrels water daily. Acidized with 1,000 gallons on 3-26-34 and after treatment produced an average of 75 barrels oil and 175 barrels water daily.

During the month of June, 1940, our Wells A-11 #1 produced an average of 41 barrels oil and 263 barrels water daily with a gas/oil ratio of 24,194 and a gas/fluid ratio of 3,293. Both oil and water are being produced from the same zone and the water could not be sealed off without also shutting off our oil pay. The well is producing with a reasonable gas/fluid ratio, and we hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-3-40
Hobbs, N.M.

Continental Oil Compa.
 Wells A-11 #1
 S. 11, T. 25S, R. 36E
 Jal Area, Lea County, N.M.
 Elev. 3183 D.F.



Lockhart A-18 #6

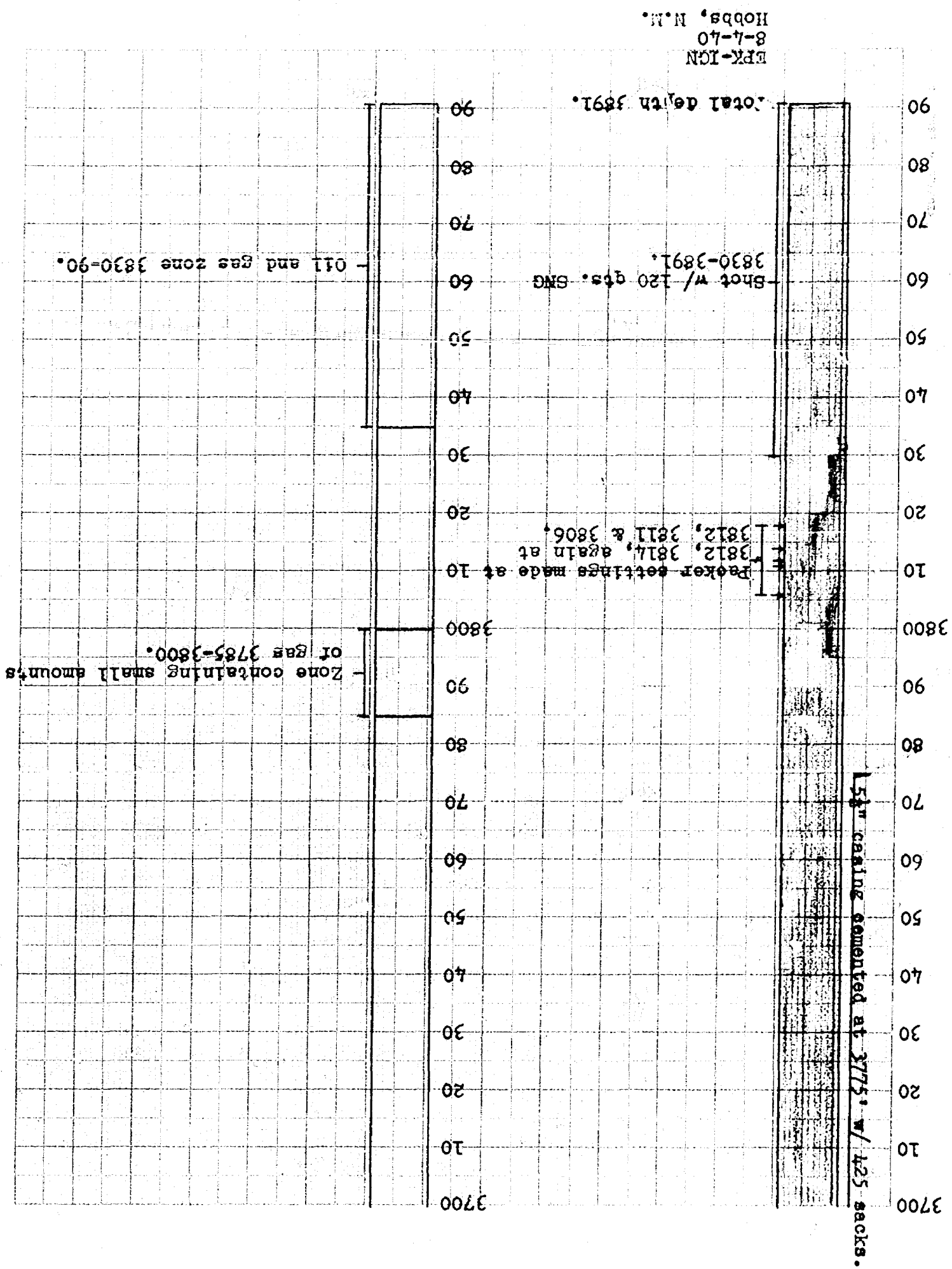
Continental Oil Company's Lockhart A-18 #6 was spudded on 12-6-38 and drilled to a total depth of 3891 with rotary tools. The 5½" casing is cemented at 3775 with 425 sacks. At the total depth of 3891, well flowed at the rate of 42 barrels oil daily through a 3/4" choke on 2" tubing with 202 MCF gas. Shot with 120 quarts S.N.G. from 3830 to 3891 and completed for a potential of 22 barrels oil hourly flowing through a 3/4" choke on 2" tubing with 2420 MCF gas.

In July, 1940, production had declined to an average of 40 barrels oil daily flowing through an 18/64" choke on 2" tubing with 560 MCF gas, a gas/oil ratio of 14,000. An Exner-Dodge underset formation packer was set six times in the zone from 3806 to 3818 without obtaining a gas shut off. The well was recomplected 7-31-40 with the packer set at 3806 for a potential of 50 barrels oil daily flowing through a 14/64" choke on 2" tubing with 458 MCF gas, a gas/oil ratio of 9,180.

The results of the above remedial work indicate that most of the gas is produced from the shot hole were a successful packer setting would be impossible. We hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-3-40
Hobbs, N.M.

Continental Oil Company
 Lockhart A-18 #6
 Sec 18, T. 21S, R. 36E
 Eunice Area, Lea County, N.M.
 Elev. 3631 D.F.



Hobbs, New Mexico
August 11, 1940

United States Geological Survey
Roswell, New Mexico

Gentlemen:

The Continental Oil Company has seven producing gas wells in Lea County. The gas produced from these wells is used as follows:

LEASE & WELL NO.

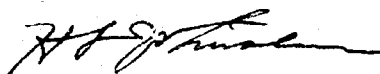
Ascarate C-24 #1	Sec. 24-25-36	Gas used for gas lift.
Stevens A-34 #1	Sec. 34-23-36	" " " " "
Lynn B-26 #1	Sec. 26-23-36	Gas sold to El Paso Natural Gas Company.
Sholes A-13 #1	Sec. 13-25-36	Gas sold to El Paso Natural Gas Company.
Sholes A-19 #1	Sec. 19-25-36	Gas sold to El Paso Natural Gas Company.
Sholes A-24 #1	Sec. 24-25-36	Gas sold to El Paso Natural Gas Company.
Sholes A-24 #2	Sec. 24-25-36	Gas sold to El Paso Natural Gas Company.

We are enclosing complete well history of each of the above wells and charts showing the producing formation and various porous zones.

U.S.G.S. - 2
8-11-40

All of the above wells are producing from a gas reservoir. We respectfully request that they be exempted from the provisions of the proposed final order of the New Mexico Oil Conservation Commission governing gas/oil ratios in the various producing fields in New Mexico.

Respectfully submitted,



H. L. Johnston
Superintendent N. M. Dist.
Texas-New Mexico Division
Production and Drlg. Dept.

EPK-IGN

Enc

cc: New Mexico Oil Conservation Commission
Mr. Glenn Staley
Mr. H. B. Sincor

ASCARATE C-24 #1

Continental-Ascarate C-24 well No. 1 was spudded on 2-6-34 and drilled to a depth of 485' w/cable tools. Rotary rig was then rigged up and the well drilled to its total depth of 3290. A test from 3190 to 3250 showed 13,000 MCF gas, no oil. Cemented the 7" OD casing at 3246 and completed well on 4-9-34 for a potential of 660 bbls. oil and 1400 MCF gas daily flowing thru a 1½" choke on 3" tubing. Was not shot or acidized when originally completed.

In May, 1934 production decreased to 175 bbls. oil daily w/900 MCF gas. Acidized on 5-10-34 w/5000 gals. and recompleted for a potential of 4800 bbls. oil daily w/14,000 MCF gas.

In November, 1937, production had declined to 40 bbls. oil and 5400 bbls. water daily flowing by gas lift. On 11-14-37 plugged back from 3290 to 3206 w/cement and perforated the 7" OD casing w/18 holes from 3140 to 3190. After perforating well flowed 600 bbls. water daily, no oil, by gas lift.

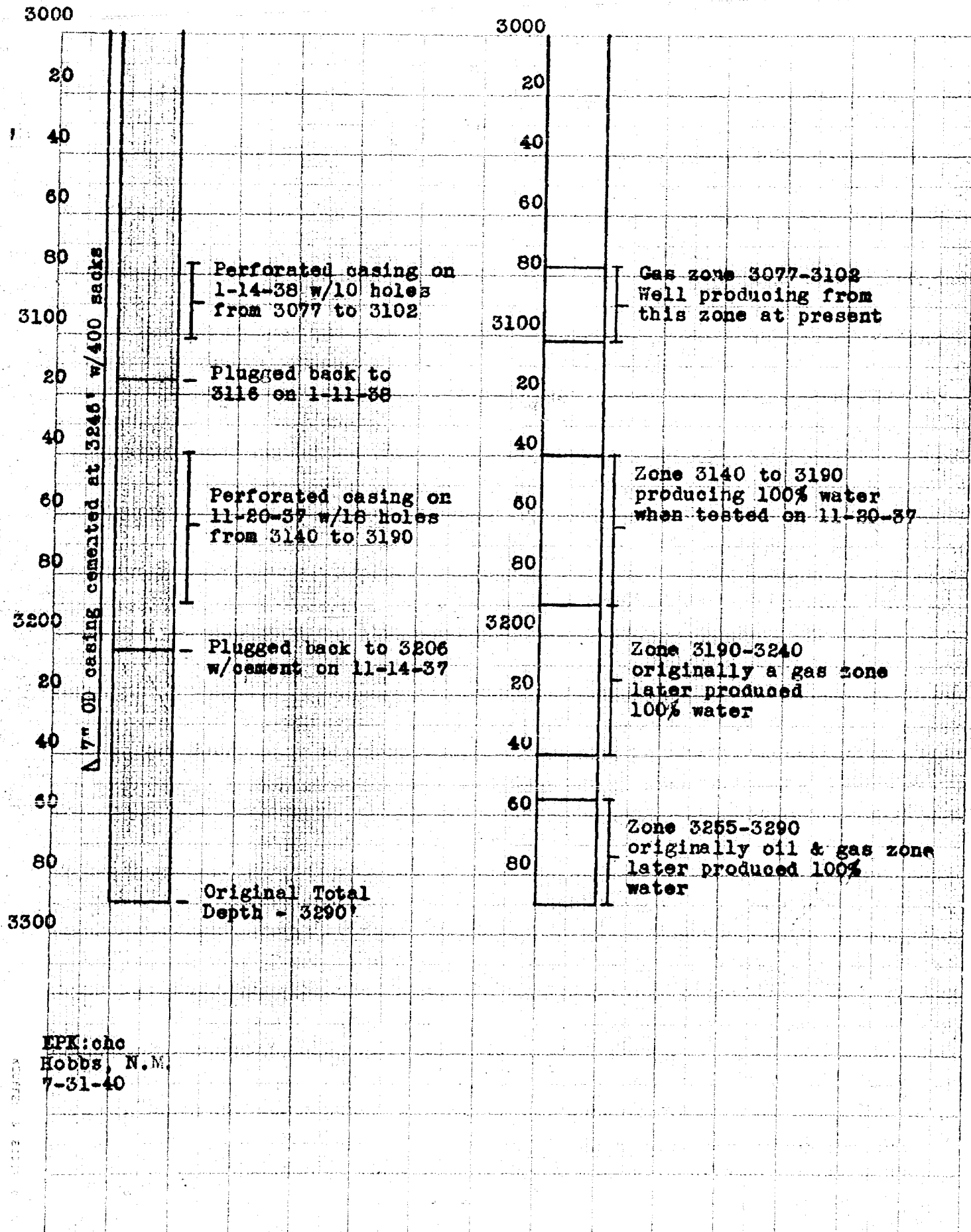
On 1-11-38 plugged back from 3206 to 3116 w/cement and perforated 7" oil string w/10 holes from 3077 to 3102. Recompleted as a gas well w/ a potential of 6540 MCF gas daily, no oil.

At the present time this well is a producing gas well, and the gas produced is used to gas lift our Sholes B-13 #2.

As our Ascarate C-24 #1 is being produced from a gas reservoir we hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK:ohc
Hobbs, N.M. 7-31-40

Continental Oil Company
 Scarate C-24 #1
 Sec. 24 T-25 S.R-36 E.
 Jal Area Lea County, N.M.
 Elev. 3109' D.F.



STEVENS A-34 #1

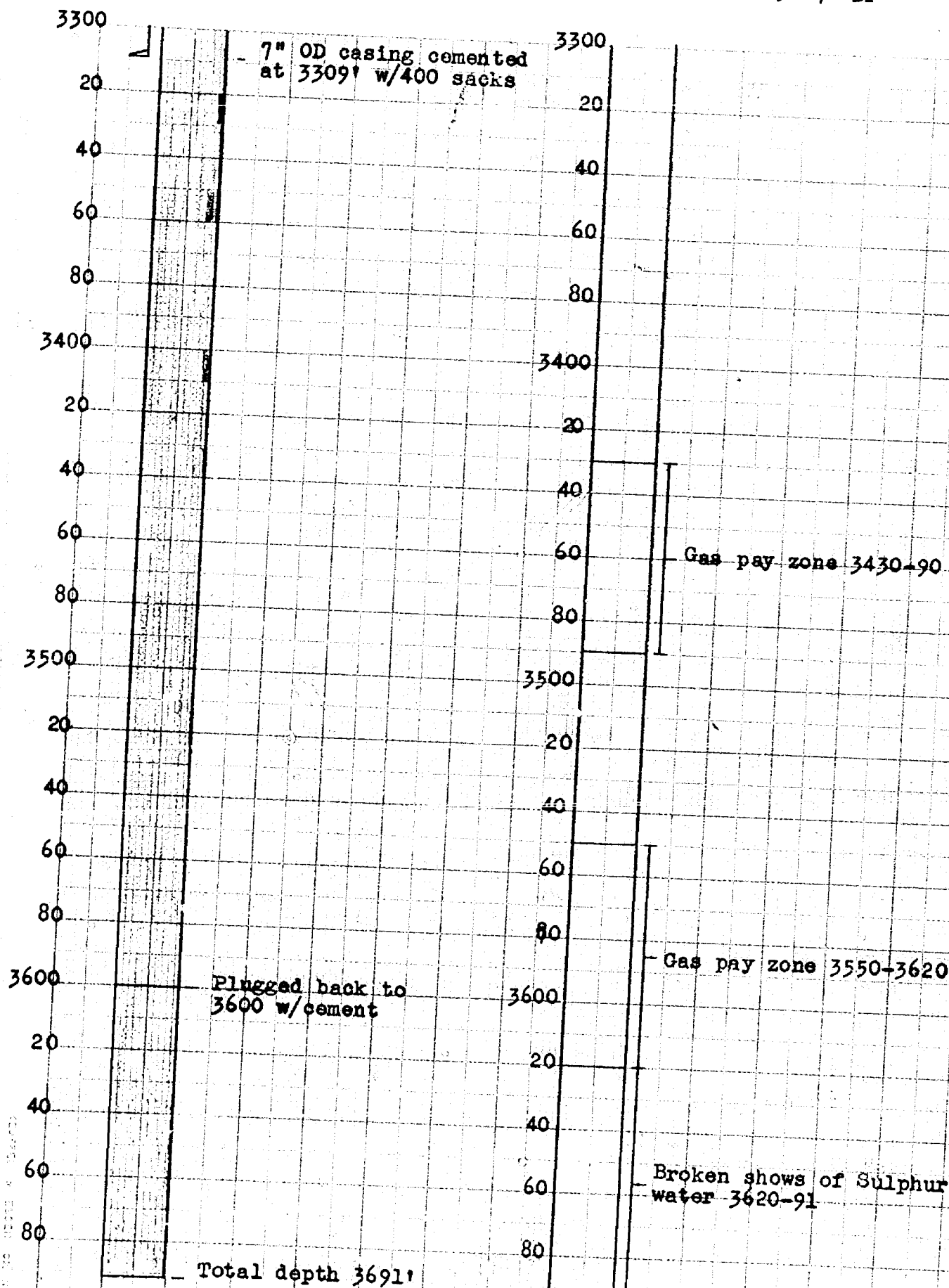
Continental Oil Company's Stevens A-34 #1 was spudded on 6-14-37 and drilled to a total depth of 3691 with rotary tools. The 7" casing is cemented at 3309 with 400 sacks. After plugging back to 3600 with cement, the well was completed for a potential of 62,200 MCF gas daily.

The gas production from this well is used to gas lift nine of our wells in the Cooper Area.

As our Stevens A-34 #1 is produced from a gas reservoir, we hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-2-40

Continental Oil Company
Stevens A-34 #1
Sec. 34 T 23-S R 36-E
Lynn Area, Lea County, N.M.
Elev: 3417' DF



LYNN B-26 #1

Continental Oil Company's Lynn B-26 #1 was spudded on 7-28-28 and drilled to a depth of 2850 w/cable tools. Rotary tools were then rigged up, the well cored from 2850 to 3571, and drilled to the total depth of 3930. The 7" casing is cemented at 3184'.

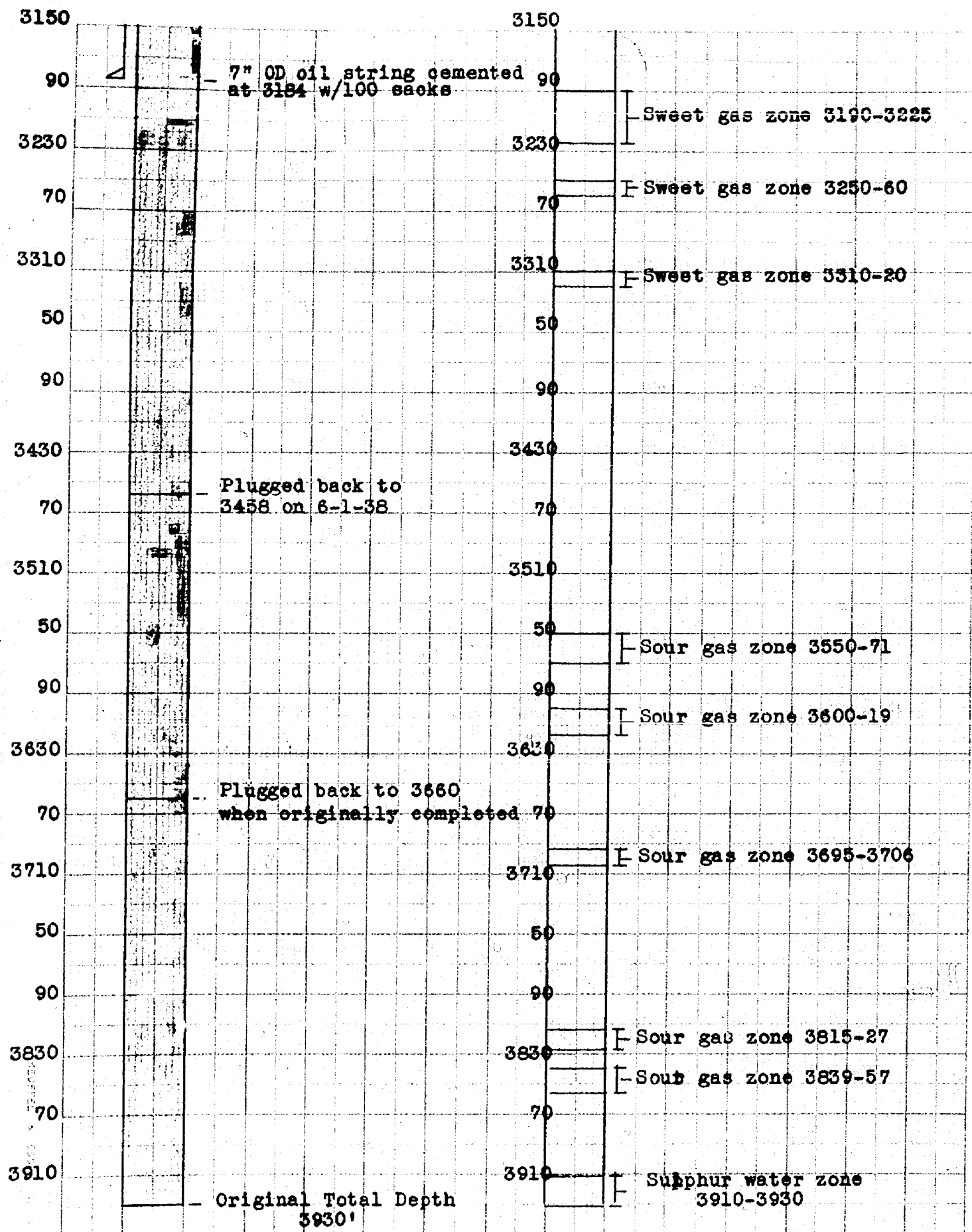
At the total depth of 3930 flowed from 400 to 600 bbls sulphur water daily, no oil. Plugged back to 3660 and completed on 1-31-29 for a potential of 30,000 MCF gas daily.

The well was shut in from the completion date until June 1, 1938 when it was plugged back to 3458 to shut off the sour gas section in order that the sweet gas could be marketed. Recompleted for a potential of 22,000 MCF gas daily and on July 22, 1939 commenced selling gas from this well to the El Paso Natural Gas Company.

No oil has ever been produced from our Lynn B-26 #1 and the gas production is coming from a gas reservoir. We hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico

EPK:che
Hobbs, N.M.
8-1-40

Continental Oil Company
 Lynn B-26 #1
 Sec. 26 T 23-S R 36-E
 Lynn Area Lea County, N.M.
 Elev. 3390' D.F.



SHOLES A-13 #1

Continental Oil Company's Sholes A-13 #1 was spudded on 5-5-34 and drilled to a depth of 491 w/ cable tools. Rotary tools were then rigged up, and the well drilled to its total depth of 3310. The 7" OD casing was cemented at 3286' with 400 sacks. Initial potential flowed 1680 barrels oil and 1,200 MCF gas daily through open 2½" tubing. Was not shot or acidized.

Well stated making water on 6-26-35, and amount of water increased to 89% the following month. On 8-6-35, reran tubing with 10 Bryan flow valves and recompleted for a potential of 50 barrels oil and 2200 barrels water daily.

On 9-13-35, well was producing 100% water. Plugged back to 3295 with cement and again flowed 100% water by gas lift. Plugged back to 3170 and on 11-15-35 drilled out plug to original total depth of 3310. After swabbing 70 barrels water hourly, no oil, deepened to 3318 and flowed 20 barrels oil and 100 barrels water hourly through tubing with Bryan flow valves. The water production increased rapidly and on 1-11-36, well was producing 325 barrels water hourly.

In January, 1936, deepened to 3344, and after rerunning tubing and flow valves, tested 325 barrels water hourly by gas lift. On 2-12-36, acidized with 2,000 gallons and then gas lifted 12,800 barrels water daily. Plugged back to 3268 and on 3-2-36 perforated the 7" casing with 6 holes from 3258 to 3263. After testing no oil, gas or water, perforated casing

with 15 holes from 3236 to 3250. Recompleted for a potential of 120 barrels oil, no water, and 800 MCF gas flowing through a 3/4" choke on 2 1/2" tubing. Well soon started producing water and by November, 1937, was producing 15 barrels oil and 2600 barrels water daily.

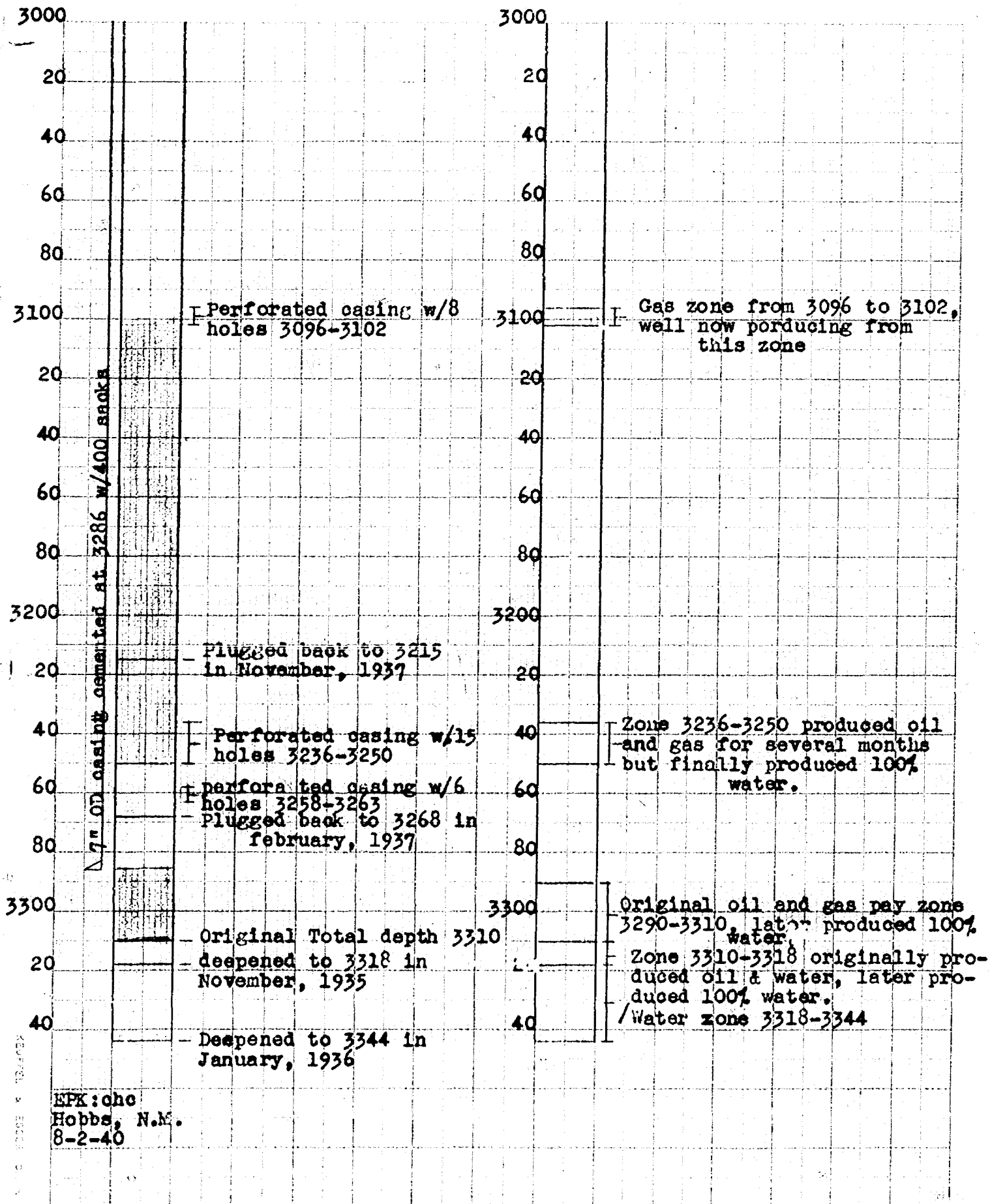
On 11-16-37, plugged back from 3268 to 3215 and perforated the 7" casing with 8 holes from 3096 to 3102. Recompleted as a gas well with a potential of 4732 MCF gas daily.

At the present time, this well is a producing gas well, and the gas produced is sold to the El Paso Natural Gas Company.

As our Sholes A-13 #1 is produced from a gas reservoir, we hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-1-40

Continental Oil Company
 Sholes A-13 #1
 Sec. 13 T 25-S R 36-E
 Jal Area, Lea County, N.M.
 Elev: 3135' DF



SHOLES A-19 #1

Continental Oil Company's Sholes A-19 #1 well was spudded on 4-23-28 and drilled to its total depth of 3030 with rotary tools. The 8½" casing was cemented at 2600' with 40 sacks. Completed as a gas well on 11-7-28 with a potential of 70,000 MCF gas daily.

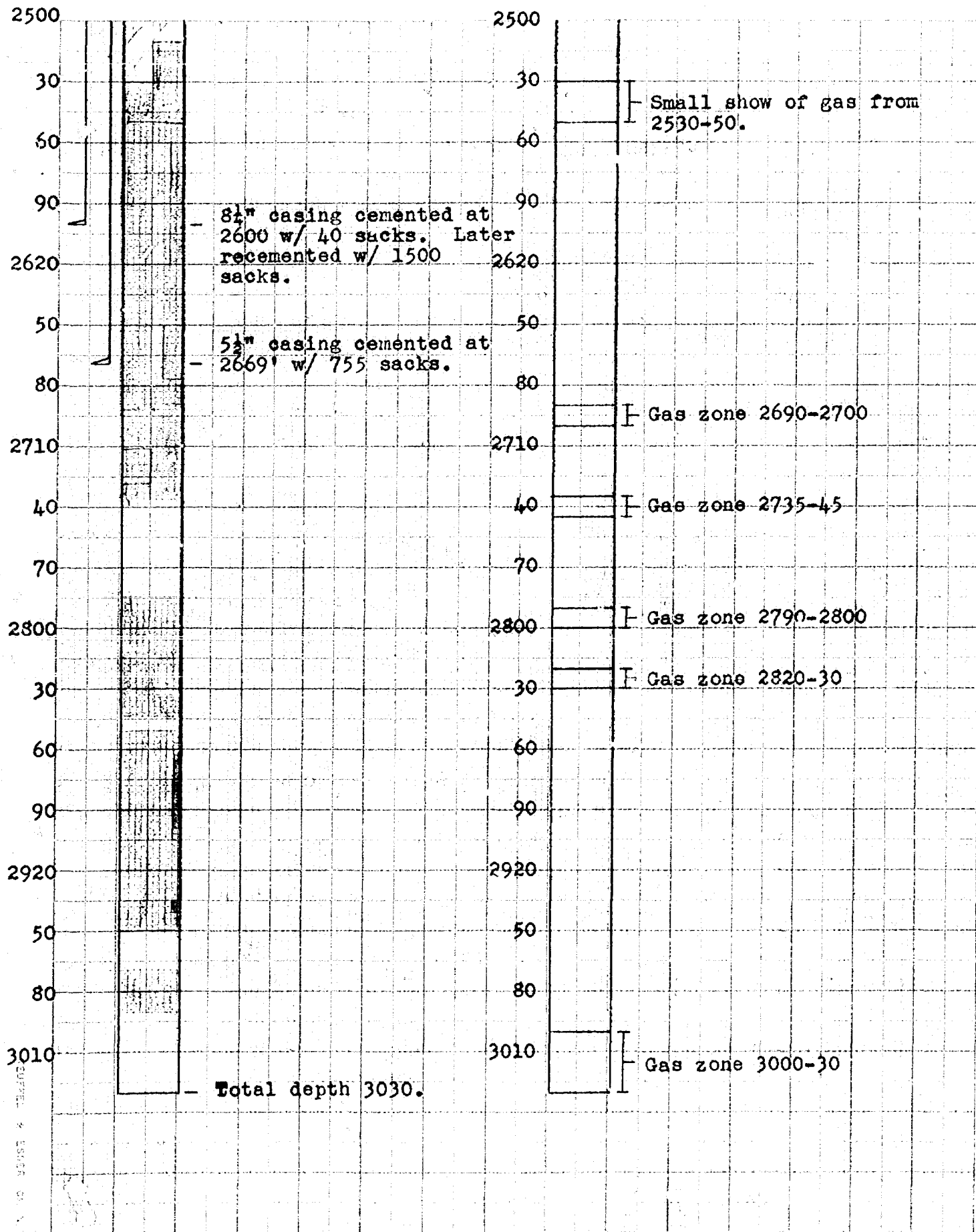
In December, 1931, the 8½" casing collapsed, and on 12-15-31, 1500 sacks of cement were pumped between the 8½" casing and 12½" casing. The casing was found to be collapsed at a depth of 826'. After swedging out the 8½" casing, a string of 5½" casing was cemented at 2669' with 755 sacks. After drilling the cement plug, the well was completed on 1-28-32 for a potential of 10,000 MCF gas daily.

At the present time, this well is a producing gas well, and the gas produced is sold to the El Paso Natural Gas Company.

As our Sholes A-19 #1 is producing from a gas reservoir, we respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-1-40

Continental Oil Company
Sholes A-17 #1
Sec. 19, T. 25S, R. 36E
Jal Area, Lea County, N.M.
Elev. 3065' D.F.



SHOLES A-24 #1

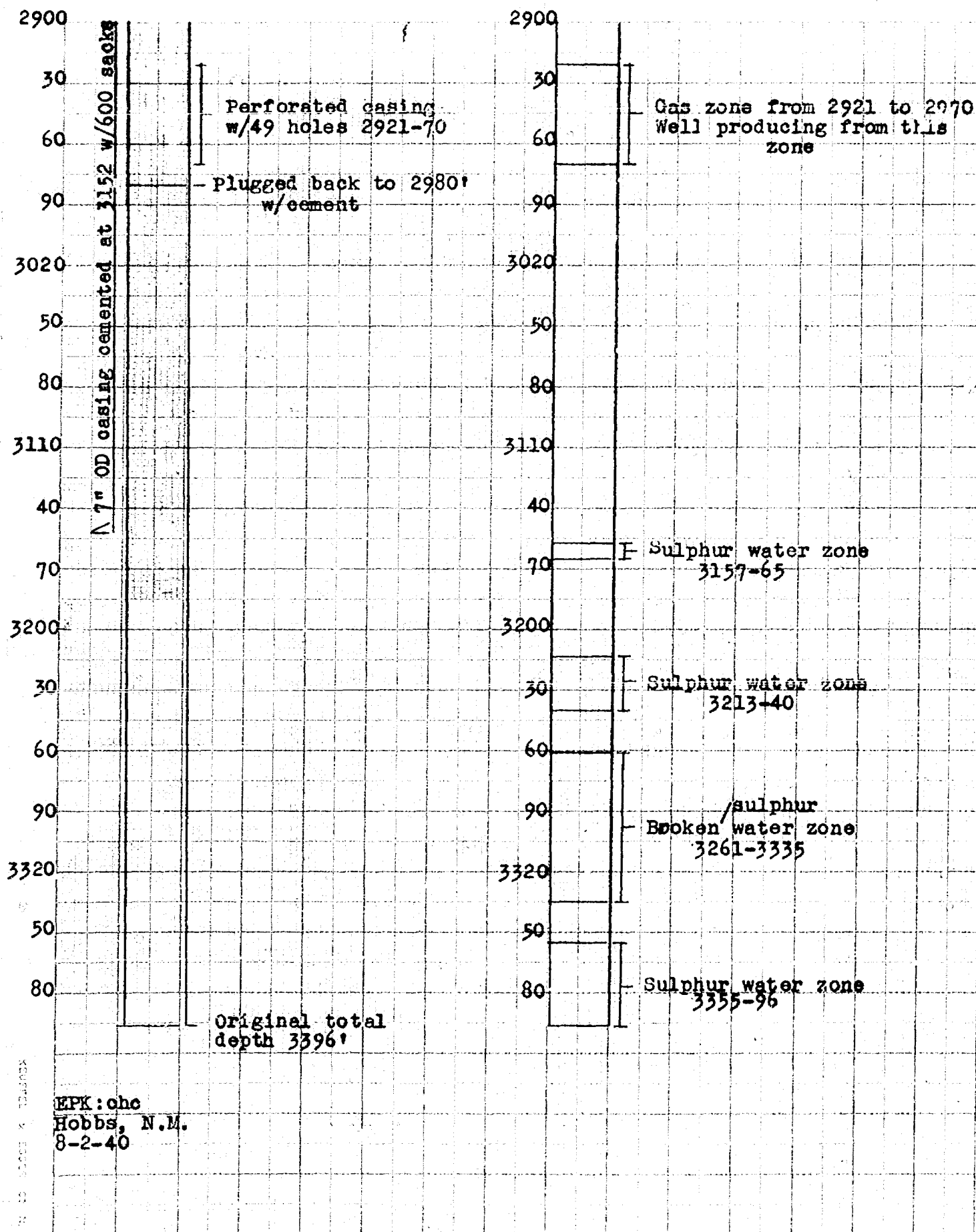
Continental Oil Company's Sholes A-24 #1 well was spudded on 10-4-36 and drilled to its total depth of 3396 with rotary tools. The 7" CD casing was cemented at 3152 with 600 sacks. After encountering broken shows of sulphur water from 3157 to 3396, the well was plugged back to 2980 with cement. The 7" casing was perforated with 49 holes from 2921 to 2970. Completed well on 12-17-36 for a potential of 23,187 MCF gas daily.

This is a producing gas well at the present time, and the gas produced is sold to the El Paso Natural Gas Company.

As our Sholes A-24 #1 is producing from a gas reservoir, we respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-1-40

Continental Oil Company
 Sholes A-24 #1
 Sec. 24 T 25-S R 36-E
 Jal Area, Lea County, N.M.
 Elev. 3098' DF



Sholes A-24 #2

Continental Oil Company's Sholes A-24 #2 was spudded on 1-10-35 and drilled to a depth of 157'. After cementing the surface string casing rotary tools were rigged up, and the well drilled to its total depth of 3274. At this depth, well flowed an estimated 1,000 barrels oil and 25,000 MCF gas daily. Ran 2" tubing with a packer set at 3264 and completed for a potential of 210 barrels oil daily flowing through a 5/8" choke on 2" tubing with 4,000 MCF gas.

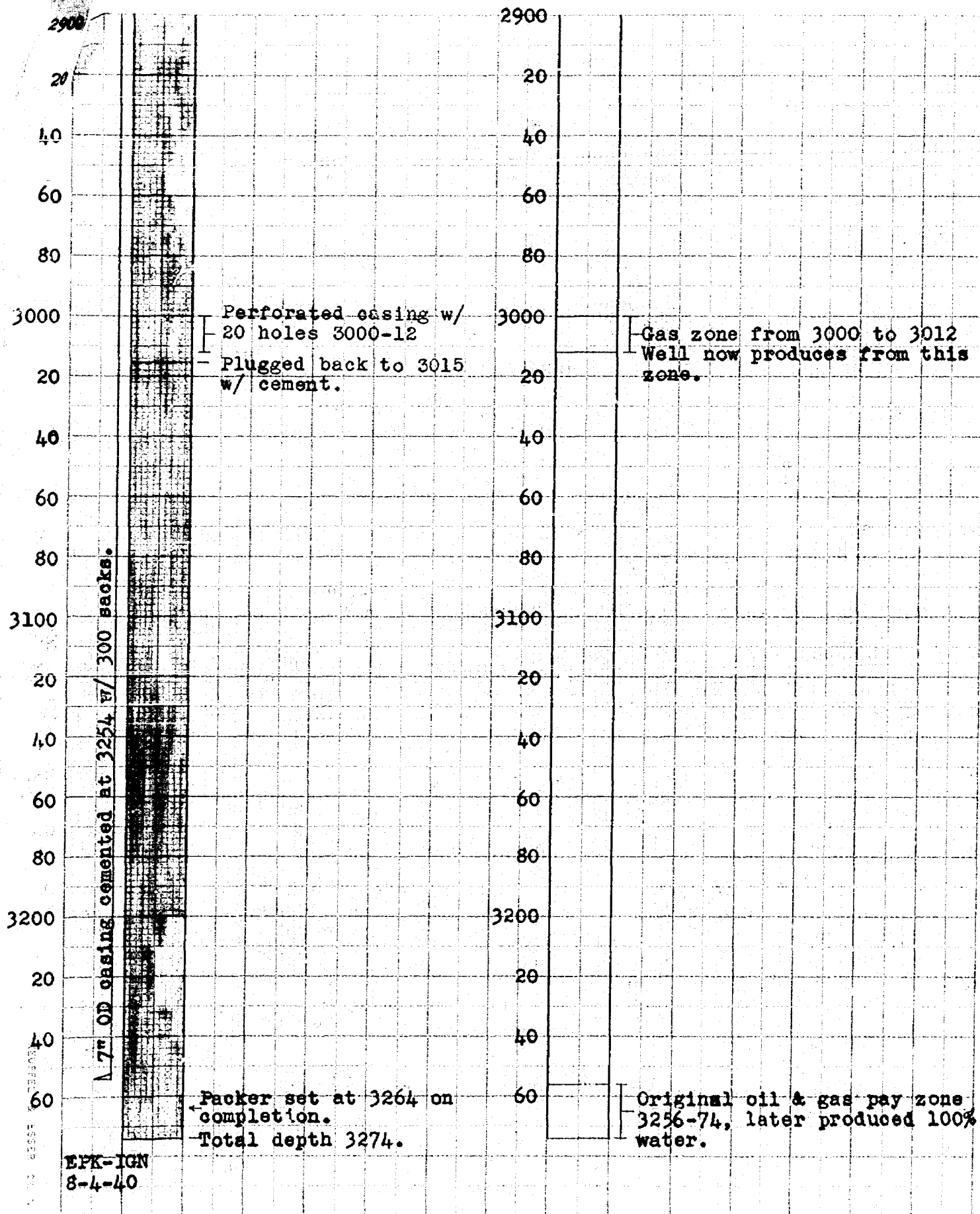
In February, 1936, production had declined to 20 barrels oil and 250 barrels water daily. Acidized on 2-29-36 with 1,000 gallons and recompleted well for a potential of 40 barrels oil and 1,000 barrels water daily flowing through 2" tubing with 999 MCF gas.

In April, 1939, production had declined to 700 barrels water hourly, no oil, by gas lift. Plugged back to 3015 with cement and perforated casing on 5-1-39 with 20 shots from 3000 to 3012. Recompleted for a potential of 2,900 MCF gas daily.

Our Sholes A-24 #2 is a producing gas well, and the gas produced is sold to the El Paso Natural Gas Company. As the well is producing from a gas reservoir, we hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-4-40
Hobbs, N.M.

Continental Oil Company
Les A-21, #2
Sec. 24, T. 25S, R. 36E
Jal Area, Lea County, N.M.
Elev. 3110 D.F.



Hobbs, New Mexico
August 11, 1940

United States Geological Survey
Roswell, New Mexico

Gentlemen:

We are enclosing data on the following five shut
in gas wells:

Lockhart B-30 #1	Sec. 30-21-36
Bill Meyer #1	Sec. 28-22-36
Sophia Meyer #1	Sec. 26-20-37
Sholes A-13 #2	Sec. 13-25-36
Wells A-12 #1	Sec. 12-25-36

The above wells are not produced at the present time as there is no market for the gas. We are enclosing the complete history of each of these wells together with charts showing the producing formation as well as the various porous zones.

We hereby respectfully request that these wells be exempt from the provisions of the proposed final order of the New Mexico Oil Conservation Commission governing

U.S.G.S. - 2
8-11-40

gas/oil ratios in the various fields in New Mexico.

Respectfully submitted,



H. L. Johnston
Superintendent N. M. Dist.
Texas-New Mexico Division
Production and Brlg. Dept.

EPK-IGN

Enc

cc: New Mexico Oil Conservation Commission
Mr. Glenn Staley
Mr. H. B. Simcox

Lockhart B-30 #1

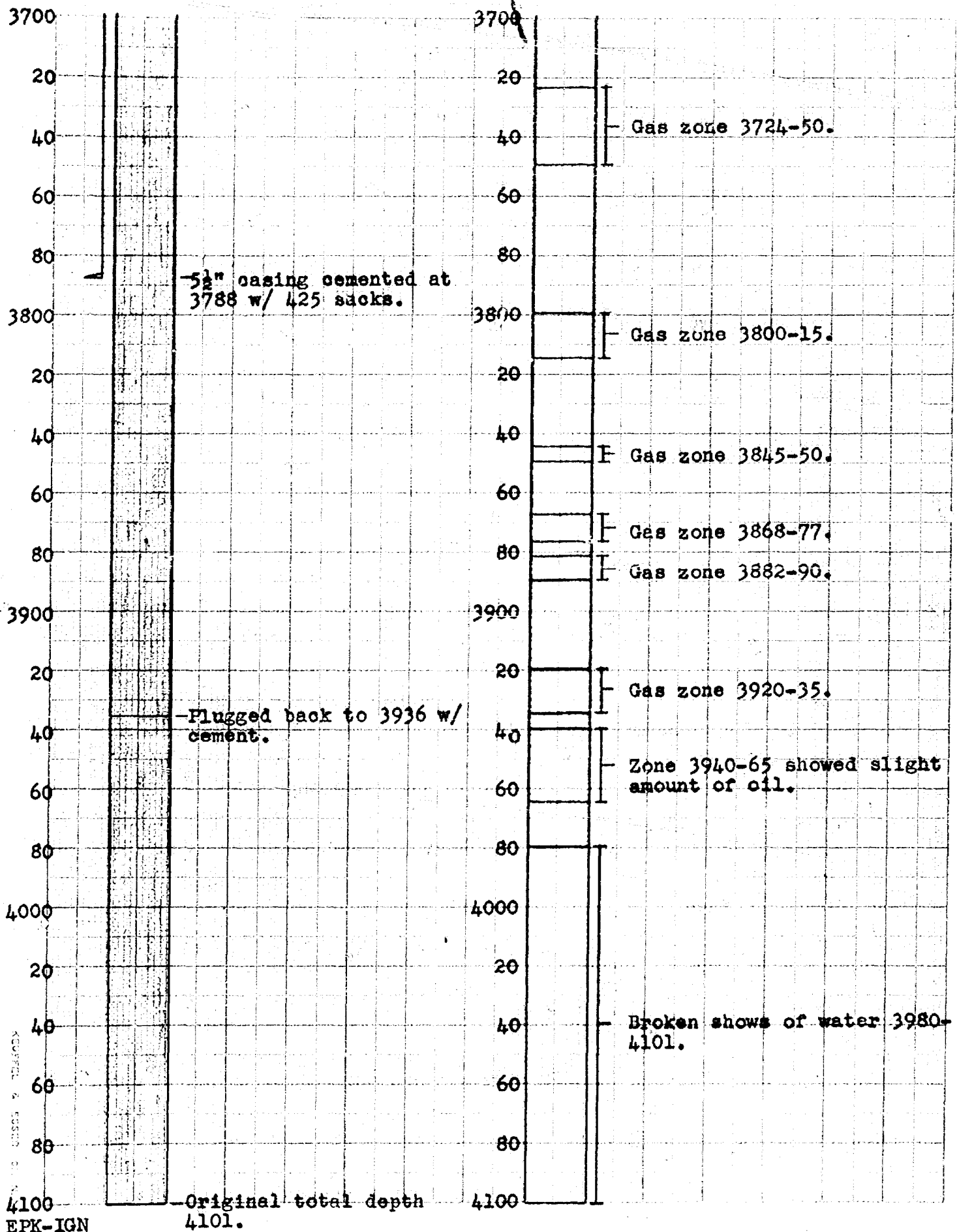
Continental Oil Company's Lockhart B-30 #1 well was spudded on 6-11-37 and drilled to a total depth of 4101 with rotary tools. The 5½" casing is cemented at 3738 with 425 sacks.

At a depth of 3930, well tested ½ barrel oil hourly by gas lift. After acidizing with 2,000 gallons, production increased to 1½ barrels oil hourly with 2,180 MCF gas. At a depth of 3955, flowed 1½ barrels oil hourly with 2,250 MCF gas. Deepened to 3965 and reacidized with 1,000 gallons, testing 1½ barrels oil hourly and 3,550 MCF gas, after treatment. Shot with 80 quarts nitro from 3930 to 3965, but again failed to materially increase production. A packer was set at 3865, and the well reacidized with 1,000 gallons below the packer. After again testing 1½ barrels oil hourly with 6,155 MCF gas, deepened to 4101 and tested 1 ¾ barrels fluid hourly, twenty to thirty percent water, with 5,780 MCF gas. Plugged back to 3936 with cement and completed as a gas well with a potential of 750 MCF gas daily.

Our Lockhart B-30 #1 has been shut in since completion and is a shut in gas well at the present time. As this well was originally completed as a gas well and has produced no oil other than a small amount, when originally drilled, we hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-4-40
Hobbs, N.M.

Continental Oil Company
 Lockhart B-30 #1
 Sec 30, T. 21S, R. 36E
 Eunice Area, Lea County, N.M.
 Elev. 3635 D.F.



EPK-IGN
 8-4-40

Bill Meyer #1

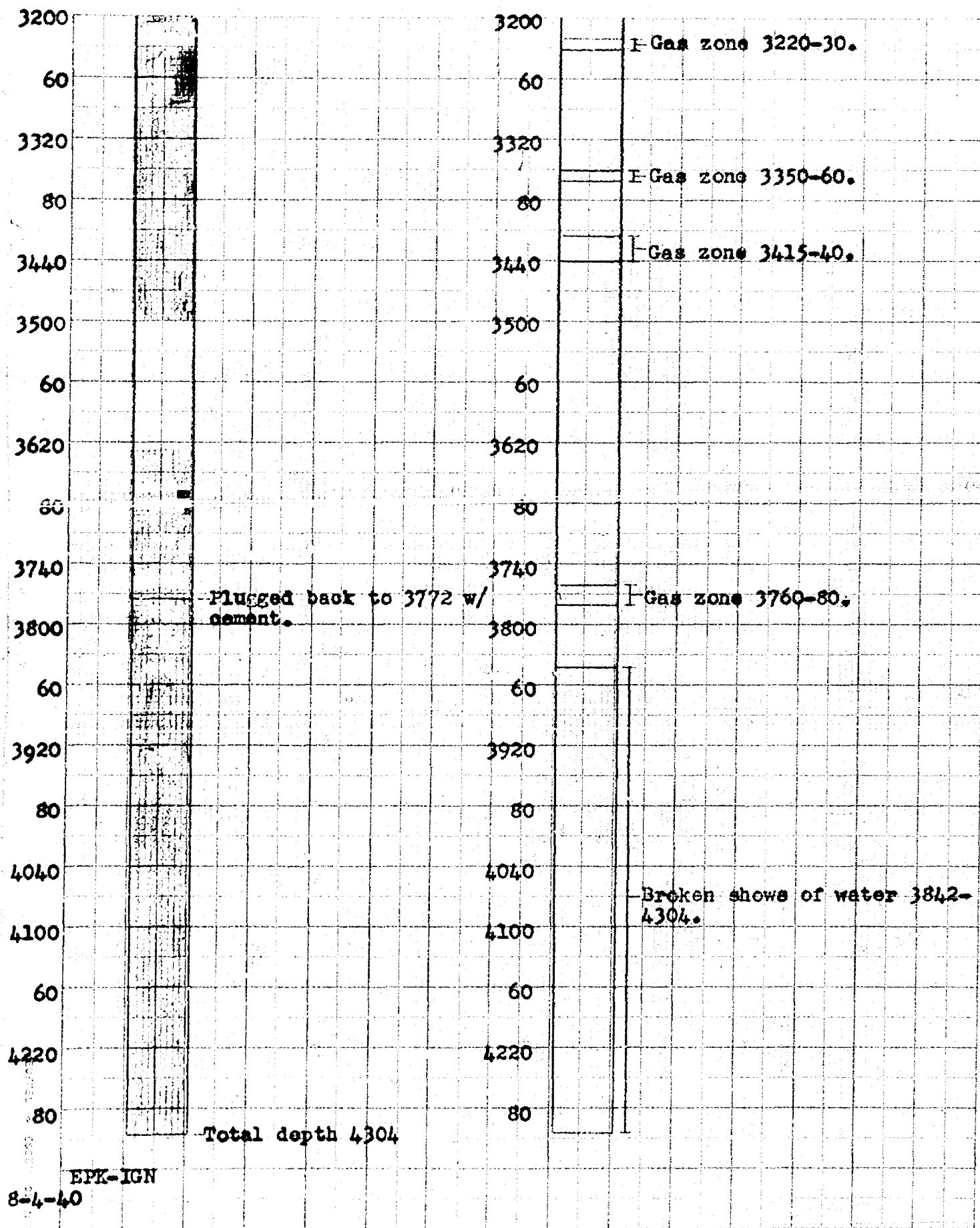
Continental Oil Company's Bill Meyer #1 well was spudded on 7-1-29 and drilled to a total depth of 4304 with cable tools. The 8 5/8" casing is cemented at 3061 with 200 sacks.

Broken shows of water were encountered from 3842 to 4304 and the well was plugged back to 3772 with cement. The well was producing an estimated 30,000 MCF gas, no oil, but as there was no market for the gas, the well was plugged to the surface with mud and completed as a temporarily abandoned gas well.

Our Bill Meyer well is still plugged, but if a market for the gas were available, the mud could be removed and the well put on production. We hereby respectfully request that this well be exempted from the provisions of the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IDN
8-1-40
Hobbs, N.M.

Continental Oil Company
Bill Meyer #1
Sec 28, T. 22S, R. 36E
S. Eunice Area, Lea County, N.M.
Elev. 3508' D.F.



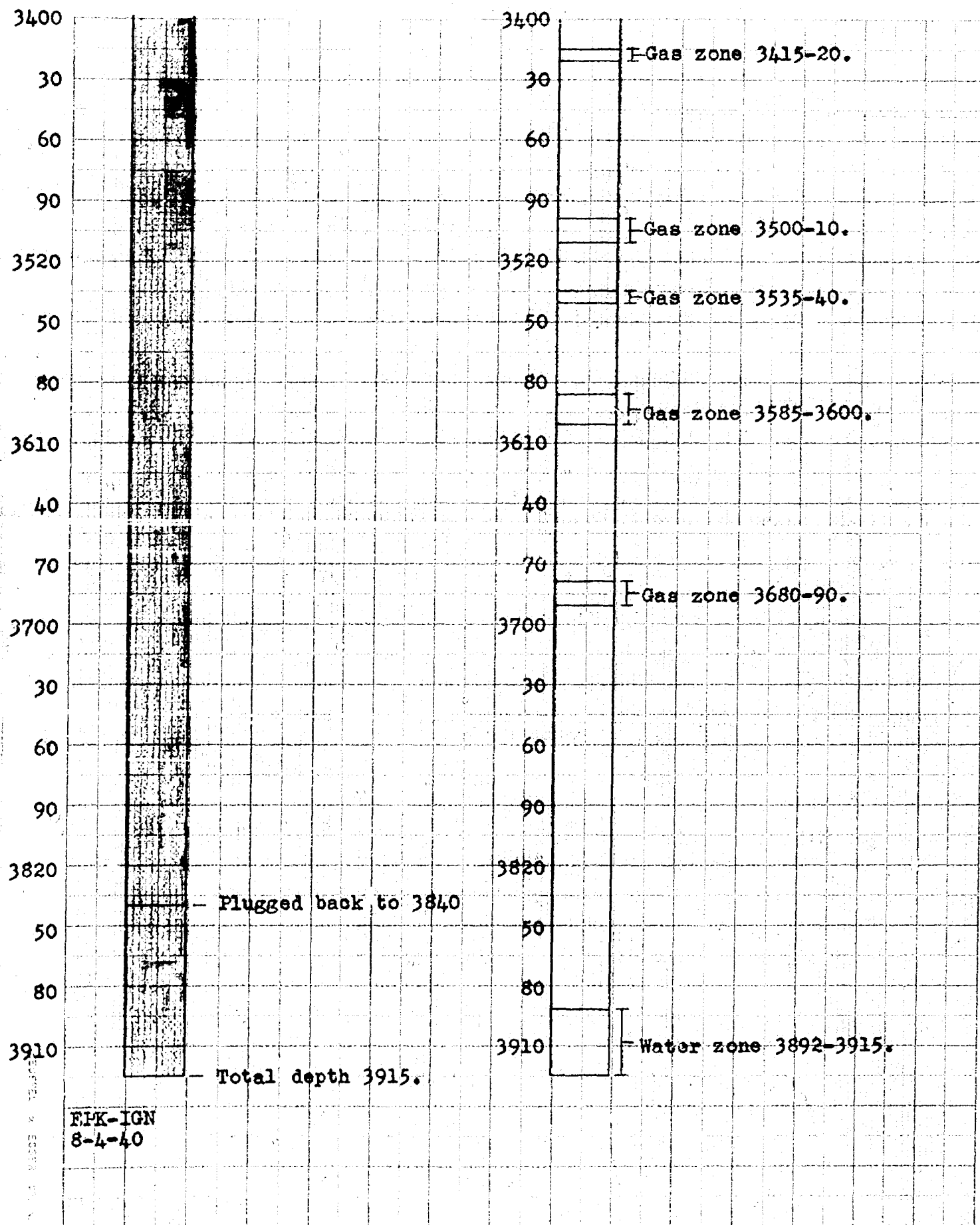
Sophia Meyer #1

Continental Oil Company's Sophia Meyer #1 well was spudded on 4-4-39 and drilled to a total depth of 3915 with cable tools. The 8 5/8" casing is cemented at 2815 with 100 sacks. After encountering water from 3892 to the total depth, the well was plugged back to 3840 and completed as a shut in gas well with a potential of 1,500 MCF daily. In June, 1939, plugged back to the surface with mud and recompleted as a temporarily abandoned gas well.

No oil was encountered in our Sophia Meyer #1, and if a market for the gas were available, the mud could be removed, and the well converted into a producing gas well. We hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-4-40
Hobbs, N.M.

Continental Oil Co
Sophia Meyer #1
Sec. 26, T. 20S, R. 37E
Skaggs Area, Lea County, N.M.
Elev. 3530 D.F.



Sholes A-13 #2

Continental Oil Company's Sholes A-13 #2 was spudded on 11-22-34 and drilled to a depth of 150' with cable tools. Rotary tools were then rigged up, and the well drilled to its total depth of 3325. The 7" casing is cemented at 3280 with 300 sacks.

At the total depth 3325, flowed from 800 to 1,000 barrels fluid daily (55 to 60% water) with 750 MCF gas. Plugged back to 3314 with cement and then tested 20 barrels fluid hourly (5% B.S. and 19% water). Plugged back to 3304 with cement and completed for a potential of 228 barrels oil and 72 barrels water daily flowing through a 12/64" choke on 2 1/2" tubing.

On 8-27-35, ten Bryan flow valves were run, and the well recompleted for a potential of 125 barrels oil and 300 barrels water daily flowing by gas lift.

In July, 1936, production had declined to 100% water, and the well was plugged back from 3304 to 3248 with cement, and the casing perforated with 10 holes from 3239 to 3248. After perforating, flowed 65 barrels water daily, no oil. Plugged back from 3248 to 3228 and perforated casing with 28 holes from 3190 to 3220. Well then tested 7 barrels water hourly, no oil, with 5,000 MCF gas. Plugged back from 3228 to 3196 and perforated casing with 30 holes from 3110 to 3140. Recompleted as a gas well with a potential of 4,000 MCF gas daily.

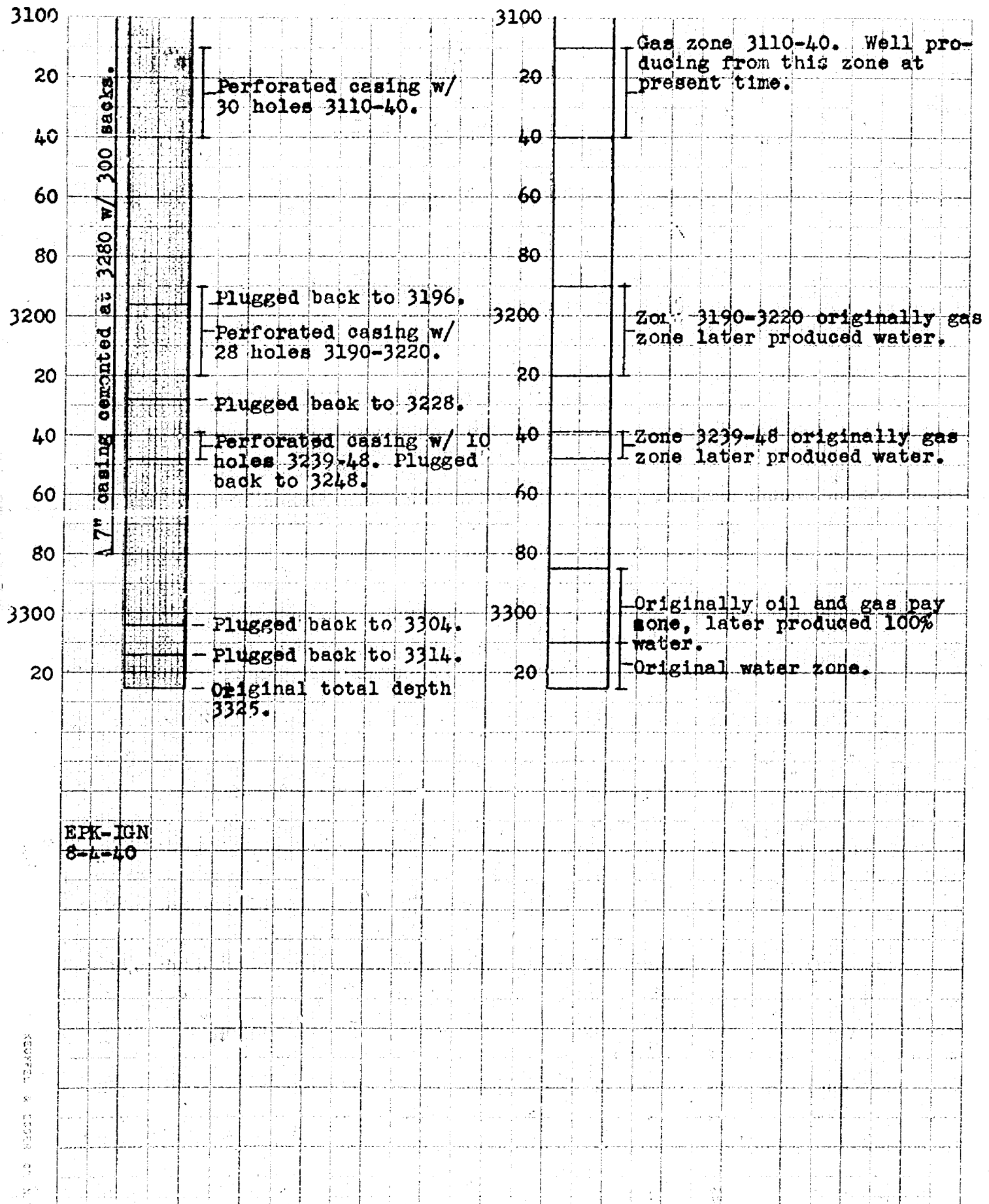
Our Sholes A-13 #2 is a shut in gas well at the present time, but could be produced if a market for the gas were available. As the well is producing from a gas reservoir, we hereby respectfully

Page 2

request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various producing fields in New Mexico.

EPK-IGN
8-4-40
Hobbs, N.M.

Continental Oil Company
 Sholes A-13 #2
 S. 13, T. 25S, R. 36E
 Jal Area, Lea County, N.M.
 Elev. 3143 D.F.



Wells A-12 #1

Continental Oil Company's Wells A-12 #1 well was spudded on 2-21-33 and drilled to a depth of 575' with cable tools. Rotary tools were then rigged up, and the well drilled to its total depth of 3408. The 7" casing is cemented at 3385 with 150 sacks. Completed on 6-14-33 for a potential of 1,200 barrels oil daily flowing through 2½" tubing with 450 MCF gas.

During May, 1935, produced 75 barrels oil and 75 barrels water daily until May 18th, when the well died due to an insufficient gas volume. Deepened to 3449, set a packer at 3430 and acidized with 2,000 gallons. After treatment, well flowed 100 barrels fluid in 8 hours, 60% water. On 8-1-35, installed a pumping unit and pumped 450 barrels water daily on a nine day test. Reran tubing with 11 Bryan flow valves and flowed 400 barrels fluid hourly, 90% water, by gas lift. By July, 1936, well was producing 8,000 barrels water daily, no oil.

On 7-31-36, plugged back to 3355 and perforated 7" casing with 29 holes from 3310 to 40 and recompleted for a potential of 53 barrels oil and 1,200 barrels water daily with an estimated 800 MCF gas, flowing natural. By November, 1936, well was again producing 100% water.

On 11-16-36, plugged back to 3290 and perforated casing with 19 holes from 3273 to 3288. Tested 35 barrels water hourly with 8,000 MCF gas. Plugged back to 3109 and perforated casing with 38 holes from 3067 to 3105. Well when tested a small amount of gas, no oil or water. Drilled out the cement plug from

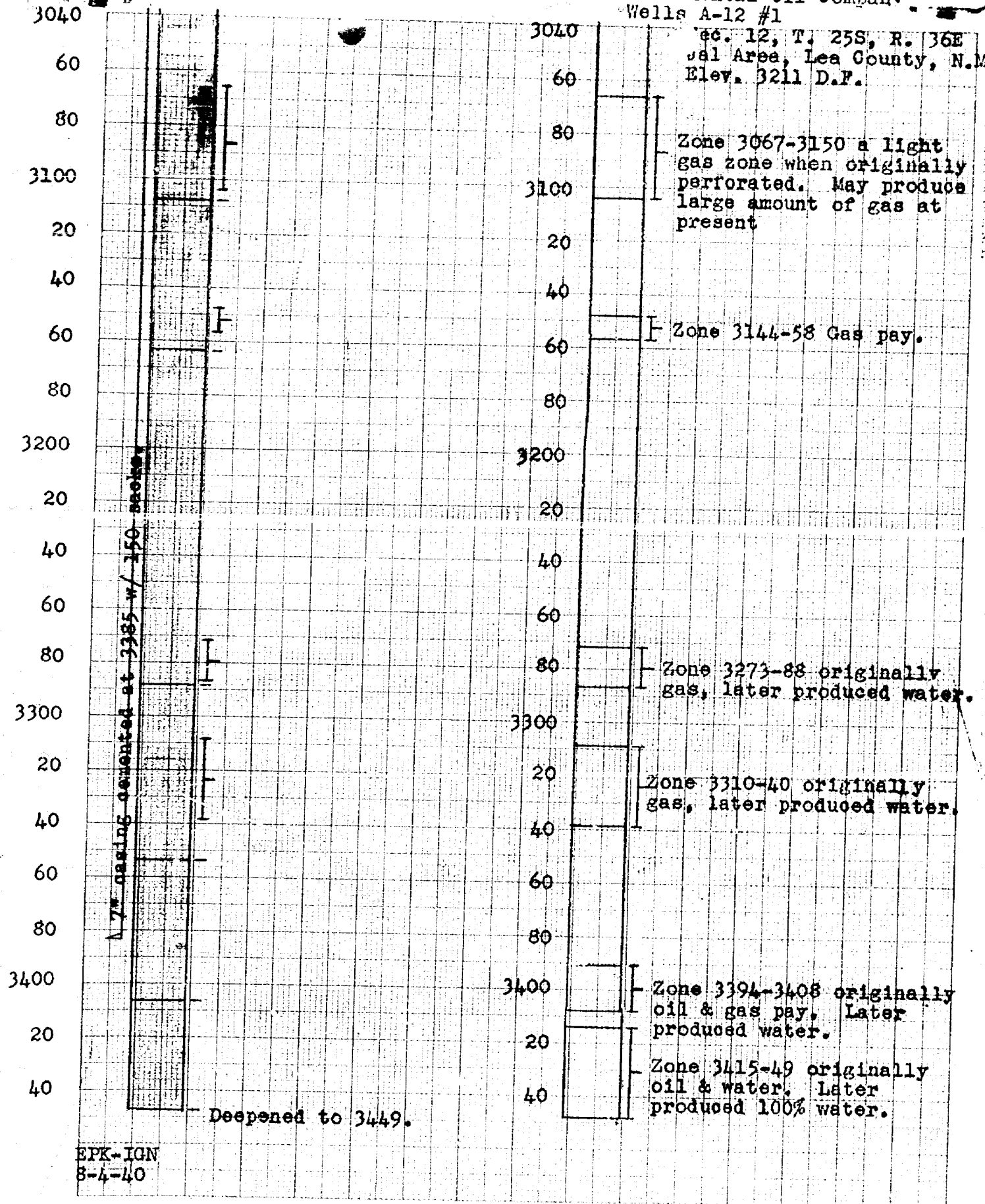
3159 to 3165 and perforated the 7" casing with 10 holes from 3149 to 3158. Recompleted as a gas well with a potential of 5,186 MCF gas daily.

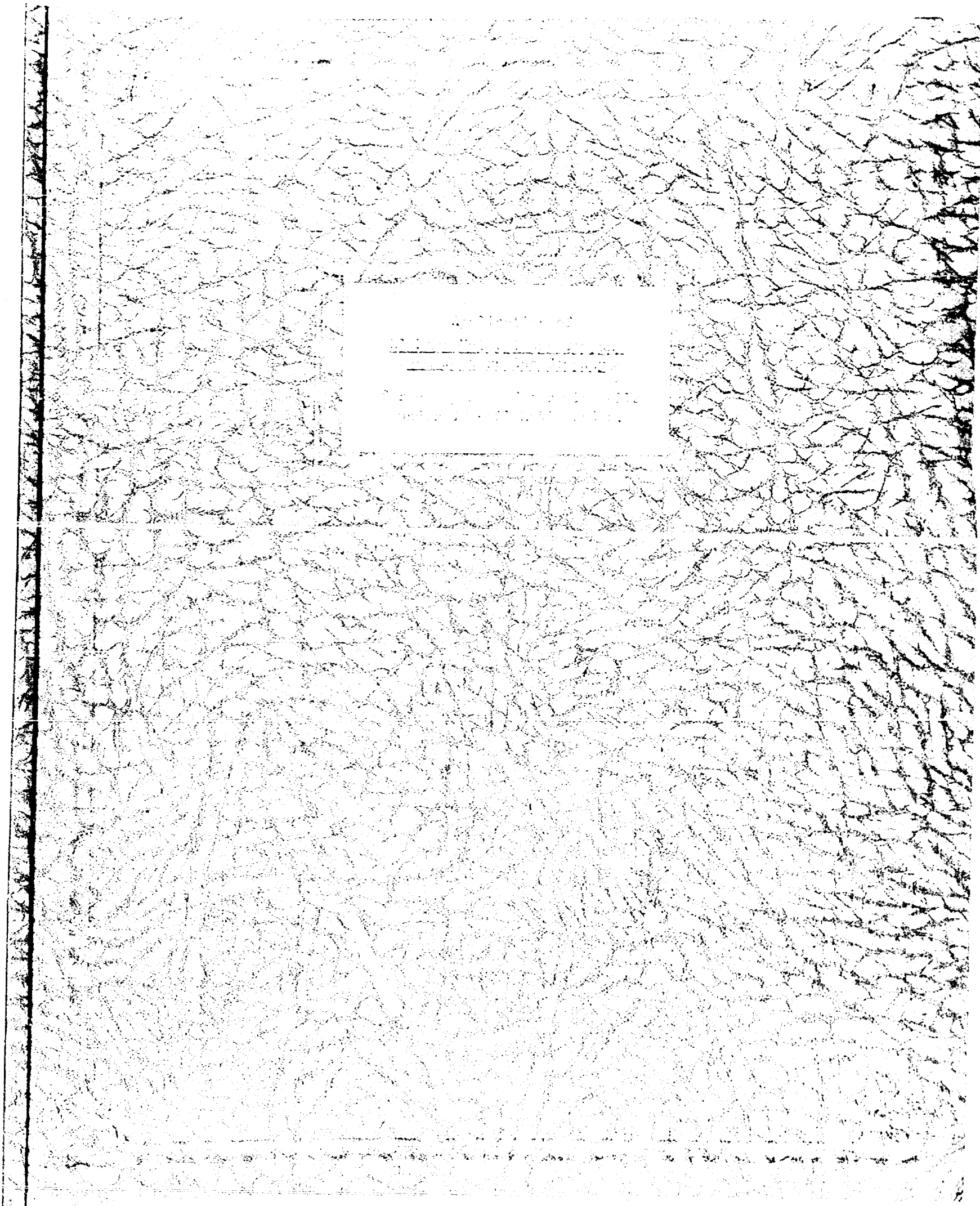
Our Wells A-12 #1 is a shut in gas well at the present time. Its gas pay is produced from a gas reservoir, and we hereby respectfully request that this well be exempted from the provisions of the proposed final order governing gas/oil ratios in the various fields in New Mexico.

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8-4-40
Hobbs, N.M.

Continental Oil Company.
Wells A-12 #1

Sec. 12, T. 25S, R. 36E
Oil Area, Lea County, N.M.
Elev. 3211 D.P.





EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

August 29, 1940

New Mexico Oil Conservation Commission,
Santa Fe, New Mexico.

Gentlemen:

At a meeting of the New Mexico Oil Conservation Commission and the Lea County Operators Committee, held in Santa Fe, New Mexico, on July 29, 1940, a proposed final Order governing gas-oil ratios for the various fields in the State of New Mexico was submitted.

The restrictions imposed by the application of this proposed Order to the subject wells owned by Western Gas Company (a wholly owned subsidiary of El Paso Natural Gas Company) and the wells owned by other producers from which El Paso Natural Gas Company purchases gas under contract, renders it physically impossible and economically infeasible for said El Paso Natural Gas Company to secure sufficient gas to operate its transmission pipe line system. Therefore, El Paso Natural Gas Company and Western Gas Company beg to petition the Commission for a permanent exemption from the application of the Gas-oil Ratio Order, submitted to the Commission for its acceptance on July 29, 1940, in so far as such Order affects the following described wells owned and operated by Western Gas Company:

<u>Wells</u>	<u>Located in Lea County</u>
<u>Stuart #1-A</u>	Northeast quarter of Northwest quarter (NE $\frac{1}{4}$ NW $\frac{1}{4}$) of Sec. 14, Twp. 25 South, Rge. 37 East.
<u>State #1-B</u>	Northeast quarter of Northwest quarter (NE $\frac{1}{4}$ NW $\frac{1}{4}$) of Sec. 2, Twp. 25 South, Rge. 37 East.
<u>Woolworth #1</u>	Northeast quarter of Northeast quarter (NE $\frac{1}{4}$ NE $\frac{1}{4}$) of Sec. 17, Twp. 25 South, Rge. 37 East.
<u>Wells #1</u>	Southwest quarter of Northeast quarter (SW $\frac{1}{4}$ NE $\frac{1}{4}$) of Sec. 6, Twp. 25 South, Rge. 37 East.
<u>Harrison #1</u>	Northwest quarter of Northwest quarter (NW $\frac{1}{4}$ NW $\frac{1}{4}$) of Sec. 7, Twp. 25 South, Rge. 37 East.

C O P Y

New Mexico Oil Conservation Commission

Aug. 29, 1940

<u>Harrison #2</u>	Northwest quarter of Northwest quarter (NW $\frac{1}{4}$ NW $\frac{1}{4}$) of Sec. 29, Twp. 24 South, Rge. 37 East.
<u>Harrison #3</u>	Northwest quarter of Southwest quarter (NW $\frac{1}{4}$ SW $\frac{1}{4}$) of Sec. 20, Twp. 24 South, Rge. 37 East.
<u>Harrison #4</u>	Northwest quarter of Southwest quarter (NW $\frac{1}{4}$ SW $\frac{1}{4}$) of Sec. 29, Twp. 24 South, Rge. 37 East.
<u>Jim Camp #1</u>	Southwest quarter of Southwest quarter (SW $\frac{1}{4}$ SW $\frac{1}{4}$) of Sec. 6, Twp. 24 South, Rge. 37 East.
<u>Curry #1</u>	Southeast quarter of Southeast quarter (SE $\frac{1}{4}$ SE $\frac{1}{4}$) of Sec. 1, Twp. 24 South, Rge. 36 East.
<u>Guthrie #1</u>	Southwest quarter of Southeast quarter (SW $\frac{1}{4}$ SE $\frac{1}{4}$) of Sec. 34, Twp. 23 South, Rge. 36 East.
<u>Matkins #1</u>	Southeast quarter of Southeast quarter (SE $\frac{1}{4}$ SE $\frac{1}{4}$) of Sec. 15, Twp. 23 South, Rge. 36 East.

Also, El Paso Natural Gas Company begs to petition the Commission for a permanent exemption from the application of said Gas-Oil Ratio Order in so far as such Order affects the following described wells, owned by the companies indicated, from which it purchases gas under contract with the producing companies:

Wells

Located in Lea County

Culbertson & Irwin, Inc.:

<u>Stuart #1</u>	Northeast quarter of Southeast quarter (NE $\frac{1}{4}$ SE $\frac{1}{4}$) of Sec. 10, Twp. 25 South, Rge. 37 East.
<u>Stuart #2</u>	Southeast quarter of Southeast quarter (SE $\frac{1}{4}$ SE $\frac{1}{4}$) of Sec. 10, Twp. 25 South, Rge. 37 East.
<u>Martin #2</u>	Northeast quarter of Northeast quarter (NE $\frac{1}{4}$ NE $\frac{1}{4}$) of Sec. 31, Twp. 24 South, Rge. 37 East.

Cities Service Oil Company:

<u>Dabbs #1</u>	Northwest quarter of Northwest quarter (NW $\frac{1}{4}$ NW $\frac{1}{4}$) of Sec. 23, Twp. 25 South, Rge. 37 East.
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Two States Oil Company:

<u>Calley #1</u>	Southeast quarter of Southwest quarter (SE $\frac{1}{4}$ SW $\frac{1}{4}$) of Sec. 20, Twp. 24 South, Rge. 37 East.
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New Mexico Oil Conservation Commission

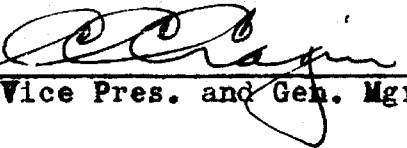
Aug. 29, 1940

In support of such petition, Western Gas Company offers the attached geological data and pertinent information respecting its above mentioned wells, and El Paso Natural Gas Company submits similar data prepared by the producers, mentioned above, from whom it purchases gas in the Lea County, New Mexico, field.

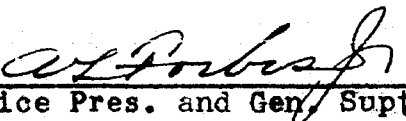
In view of the facts substantiated by the enclosed data, we respectfully request that the wells listed above be permanently exempted from the application of the aforesaid Gas-oil Ratio Order.

Respectfully submitted,

EL PASO NATURAL GAS COMPANY

By 
Vice Pres. and Gen. Mgr.

WESTERN GAS COMPANY

By 
Vice Pres. and Gen. Supt.

Order of data contained in following report
prepared by WESTERN GAS COMPANY

1. Yates information.
2. Stuart #1-A well.
3. State #1-B well.
4. Woolwerth #1 well.
5. Wells #1 well.
6. Harrison #1 well.
7. Harrison #2 well.
8. Harrison #3 well.
9. Harrison #4 well.
10. Jim Camp #1 well.
11. Curry #1 well.
12. Guthrie well #1.
13. Matkins #1 well.

DESCRIPTION OF THE YATES FORMATION

The Yates formation is principally a lenticular sand with shale, anhydrite and lime stringers and is fairly continuous over the entire area in question. It lies immediately below the Tansil formation and above the Seven Rivers formation, all of which are of Permian Age. In some localities it is a well developed sand with large frosted quartz grains which usually carries large volumes of gas and in other localities the well developed sand is absent and only the large frosted quartz grains in anhydrite and shale are present and is usually non-productive. The thickness varies from 125' to 175'.

The Yates is predominantly a gas bearing formation and in practically all of the wells in this area the oil production string of casing is set through the Yates and cemented back to the base of the salt. The top of the Yates formation is readily recognized by the abundance of large frosted quartz grains and is used extensively in contouring and subsurface work.

We believe that after a study of the logs and geological information, that there is sufficient proof that the Yates formation is predominantly a gas bearing formation and we, therefore, respectfully request that any wells completed as gas wells in this formation be given exemption from the permanent gas-oil ratio order.

The following attached information will substantiate the above request.

FORMATION TESTS and LOGGED SHOWS OF GAS
(Confidential Information)

LANGLIE AREA

Anderson-Prichard Oil Corp. - Stuart #3

NW/4 NW/4 Sec. 9, T-25-S, R-37-E.

The approximate top of the Yates formation is 2860'.
Show of gas was logged at 2900'-22'.

Anderson-Prichard Oil Corp. - Jal #1

NE/4 NE/4 Sec. 8, T-25-S, R-37-E.

The approximate top of the Yates formation is 2880'.
Show of gas was logged at 2880'.

Anderson-Prichard Oil Corp. - Lanehart #1

SW/4 NW/4 Sec. 21, T-25-S, R-37-E.

The approximate top of the Yates formation is 2740'.
Show of gas was logged at 2738' to 2827'. Blew out
and estimated open flow 25,000 MCF gas per day.

Anderson-Prichard Oil Corp. - Wells #2

SW/4 SE/4 Sec. 5, T-25-S, R-37-E.

The approximate top of the Yates formation is 2850'.
Show of gas was logged at 2909'.

Anderson-Prichard Oil Corp. - Wells #4

NW/4 NW/4 Sec. 5, T-25-S, R-37-E.

The approximate top of the Yates formation is 2900'.
Show of gas was logged at 2915' to 2937'.

Western Gas Company - Woolworth #1

NE/4 NE/4 Sec. 17, T-25-S, R-37-E.

The approximate top of the Yates formation is 2840'.
Show of gas was logged at 2940'. Estimated open
flow 5,000 MCF dry gas per day.

Western Gas Company - Wells #1

SW/4 NE/4 Sec. 6, T-25-S, R-37-E.

The approximate top of the Yates formation is 2850'.
The well was plugged back into 7" casing and per-
forated with 177 shots from 2830' to 3170'. Best
pay at 2850' to 3070'. Initial production after per-
foration of 7" casing was 15,000 MCF of dry gas per day.

Langlie Area (cont'd)

Western Gas Company - Harrison #1

NW/4 NW/4 Sec. 7, T-25-S, R-37-E.

The approximate top of Yates formation is 2850'.

The well was plugged back into 7" casing and perforated with 17 shots from 2870' to 2910'. Initial production after perforation of 7" casing was 3,600 MCF dry gas per day.

Italo Petroleum Corp. of America - Wells B-5-#2

SE/4 NE/4 Sec. 5, T-25-S, R-37-E.

The approximate top of the Yates formation is 2880'.
Show of gas was logged at 2900'-20'.

MARTIN AREA

Atlantic Oil & Refining Co. - State "24" #1

SE/4 SW/4 Sec. 32, T-24-S, R-37-E.

The approximate top of the Yates formation is 2920'.
Show of gas was logged at 2960'.

Skelly Oil Company - Sherrel #1

SE/4 SE/4 Sec. 31, T-24-S, R-37-E.

The approximate top of the Yates formation is 2890'.
Show of gas was logged at 2898' to 2916'.

Anderson-Prichard Oil Corp. - State A-32 #1

SE/4 NW/4 Sec. 32, T-24-S, R-37-E.

The approximate top of the Yates formation is 2910'.
Show of gas was logged at 2965' to 2996'.

Culbertson & Irwin, Inc. - Martin #1

SE/4 NE/4, Sec. 30, T-24-S, R-37-E.

The approximate top of the Yates formation is 2880'.
Show of gas was logged at 2893' to 2910'.

Culbertson & Irwin, Inc. - Martin #2

NE/4 NE/4 Sec. 30, T-24-S, R-37-E.

The approximate top of the Yates formation is 2870'.
Show of gas was logged at 2900'.

Schermerhorn Oil Company - Woolworth #1

NW/4 NE/4 Sec. 28, T-24-S, R-37-E.

The approximate top of the Yates formation is 2780'.
Show of gas was logged at 2780' to 2975'. Estimated open flow of 3,000 MCF dry gas per day.

Mattix Area (cont'd)

Schermerhorn Oil Co. - Woolworth #3

NW/4 SE/4 Sec. 28, T-24-S, R-37-E.

The approximate top of the Yates formation is 2870'.
Show of gas was logged at 2930'-35'. Estimated
open flow of 3,000 MCF dry gas per day.

Western Gas Company - Harrison #2

NW/4 NW/4 Sec. 29, T-24-S, R-37-E.

The approximate top of the Yates formation is 2900'.
Formation tested from 2900' to 3040'. Open flow
gauge was 18,000 MCF dry gas per day.

Western Gas Company - Harrison #4

NW/4 SW/4 Sec. 29, T-24-S, R-37-E.

The approximate top of the Yates formation is 2900'.
Open flow test at total depth 2965'. Gauged 24,000
MCF dry gas per day.

Continental Oil Company - Jack B-29-#1

SE/4 SE/4 Sec. 29, T-24-S, R-37-E.

The approximate top of the Yates formation is 2920'.
Show of gas was logged at 2945'-65'.

C. T. McLaughlin - Polhamus #1

NW/4 NE/4 Sec. 9, T-24-S, R-37-E.

The approximate top of the Yates formation is 2680'.
Show of gas was logged at 2680'-90'.

Stanolind Oil and Gas Company - Myers B-#5

NE/4 SW/4 Sec. 9, T-24-S, R-37-E.

The approximate top of the Yates formation is 2640'.
Show of gas was logged at 2646' to 2687'.

Western Gas Company - Jim Camp #1

SW/4 SW/4 Sec. 6, T-24-S, R-37-E.

The approximate top of the Yates formation is 2910'.
Open flow test at total depth 3210'. Gauged
16,000 MCF of dry gas per day.

COOPER AREA

Western Gas Company - Toby #1

SE/4 SE/4 Sec. 12, T-24-S, R-36-E.

The approximate top of the Yates formation is 2940'.

Show of gas was logged at 2960' to 3010'.

Western Gas Company - Toby #2

NE/4 SE/4 Sec. 12, T-24-S, R-36-E.

The approximate top of the Yates formation is 2920'.

Show of gas was logged at 2940'.

Continental Oil Company - Vaughn B-12 #1

SE/4 NE/4 Sec. 12, T-24-S, R-36-E.

The approximate top of the Yates formation is 2910'.

Show of gas was logged at 2960' to 3010'. The well blew out at total depth 3010' and was estimated to be making 50,000 MCF of dry gas per day.

Western Gas Company - Curry #1

SE/4 SE/4 Sec. 1, T-24-S, R-36-E.

The approximate top of the Yates formation is 2890'.

Show of gas was logged at 2915' to 2955'.

LYNN AREA

Texas & Pacific Coal & Oil Company - State Account 1-A #7

NW/4 NW/4 Sec. 22, T-23-S, R-36-E.

The approximate top of the Yates formation is 3140'.

Show of gas was logged at 3135' to 3165'.

Western Gas Company - Watkins #1

SE/4 SE/4 Sec. 15, T-23-S, R-36-E.

The approximate top of the Yates formation is 3005'.

The 5-1/2" casing was perforated from 3030' to 3150'.

Initial production after perforation of casing was 14,000 MCF. During drilling of this well an open flow test was made of this; gas was taken which gauged 30,000 MCF of dry gas.

Western Gas Company - Lankford #1 (drilled by Culbertson & Irwin, Inc.)

NE/4 NW/4 Sec. 25, T-23-S, R-36-E.

The approximate top of the Yates formation is 2930'.

Shows of gas were logged from 2930' to 3030'.

At total depth, 3030', the well blew out making an estimated 100,000 MCF of dry gas.

The foregoing data was taken from actual tests made on the wells or shows of gas logged while the wells were being drilled.

In so far as our records indicate, the only production from the Yates formation is gas and in no wells has it been found productive of oil; therefore, it is our conclusion that the Yates formation is definitely a gas bearing formation.

Western Gas Company

Stuart #A-1 - NE/4 NW/4 Sec. 14, T-25S, R-37E.
State #B-1 - NE/4 NW/4 Sec. 2, T-25S, R-37E.

These wells are situated high on the structure and the producing zones in these wells are predominantly gas bearing; these same zones in offsetting wells are also predominantly gas bearing. The gas producing zones of these wells are lenticular sands identified as a part of the lower Queen's formation.

The gas being produced from these wells may be coming from the same zone which is producing oil in the wells to the west, as the wells to the west are lower on the structure. However, the nearest oil wells producing from this zone are two or three locations away.

Western Gas Company owns approximately 1,280 acres of gas rights in this immediate area. It is our belief that we should be granted the right to withdraw an amount of gas equal to the total gas produced plus a volume of gas equal to the reservoir space voided by oil produced from producing oil wells on the acreage on which we have purchased gas rights and, also, our undeveloped acreage which is being drained by offsetting wells. In no event will Western Gas Company withdraw a daily average amount of gas more than 25% of the open flow capacity of the gas wells in question.

If the requested relief is not granted and the wells are prorated to a withdrawal of gas equivalent to an amount of gas produced plus a volume of gas equivalent to the reservoir space voided by oil from one oil producing well, or a 40 acre unit, then production from these wells would cease to be profitable, causing premature abandonment and direct injury to the operator and royalty owners.

Attached you will find all necessary geological and other pertinent data covering these wells which substantiates our request for exemption from the permanent gas-oil ratio order.

Western Gas Company

Stuart A #1

NE/4 NW/4 of Sec. 14. T-25. R-37

Well History

This well was drilled and completed by the Carl B. King Drilling Company and was purchased by Western Gas Company. It was spudded on Feb. 2, 1938, and completed on Mar. 15, 1938.

On Feb. 18, 1938, 961' of 7-5/8" casing was cemented with 250 sacks of cement and on Feb. 26, 1938, 3271' of 4-3/4" casing was cemented with 150 sacks of cement. Shows of gas were logged at 2380'-93'; 2410'-30'; 2550'-60'; 3095' to 3121' and 3282'-96'. At 3359' the well gauged 4,790 MCF of gas.

The initial production, after shot of 140 quarts at 3326'-95' with a packer at 3300', was about 5 to 8 barrels of oil per day. In March, 1940, the well was reworked and sold to Western Gas Company. The tubing was pulled and the well was cleaned out to 3336' and it tested 650 MCF of gas and about 10 barrels of oil per day where it had originally tested 4,790 MCF. Lane-Wells shot gas pay below casing and increased the gas to 2,500 MCF with about the same amount of oil. The casing was perforated and the well tested 7,000 MCF total.

Tubing and packer were run back in the hole and packer set at 3238' in the casing below the perforations, and the well tested 2,500 MCF of gas with 14 barrels of oil per day.

Casing Record:

<u>Size</u>		<u>Depth</u>	<u>Sacks Cement</u>
7-5/8"	@	921'	300
4-3/4"	@	3271'	150
2" tubing	@	3336' with packer 3238'	
2" side door choke	@	3208' with perforations below packer.	

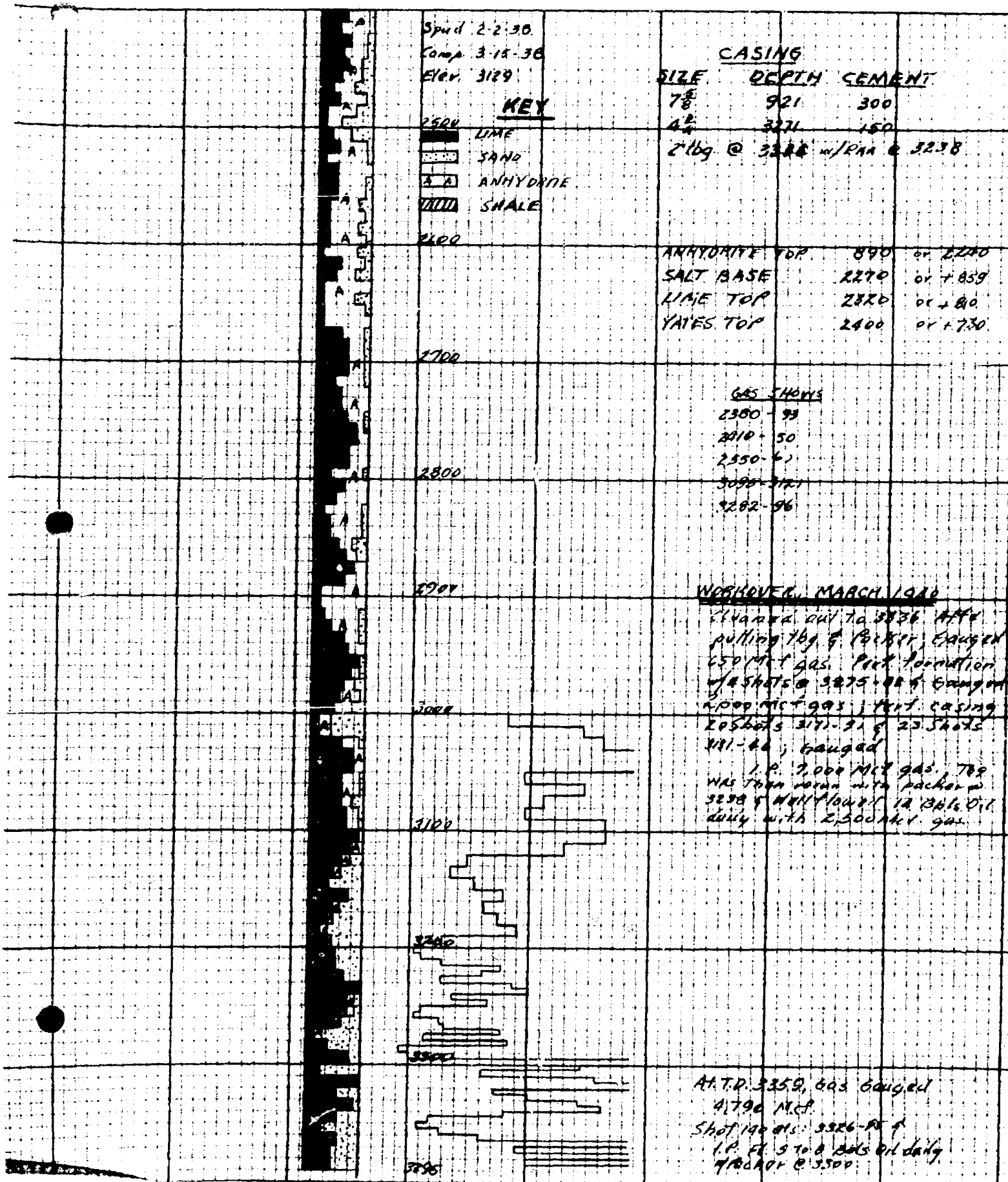
Perforation Record:

20 Shots	3171' to 3191'
23 Shots	3131' to 3146'
4 Shots	3275' to 3285' in gas sand below casing.

Geological Points:

Elevation	3129'
Base salt	2270'
Top brown line	2320'
Top Yates	2400'

WESTERN GAS CO. '1 STUART "A"



Western Gas Company

State B #1

NE/4 NW/4 of Sec. 2, T-25, R-37

Well History

The well was spudded Mar. 22, 1939, by Parker Drilling Company, which company was the operator and owner until the well was drilled to total depth. After it was shot, it was purchased by Western Gas Company.

Fresh water was encountered at 450' to 516' in sand. A 15" casing was set at 61' but was pulled when 12-1/2" was cemented at 176' with 100 sacks of cement. A 10-3/4" casing was landed at 810' to shut off water but was pulled when 8-1/4" was cemented with 100 sacks of cement at 1294'.

A slight show of gas was found at 2390' in the brown lime. The 7" casing was set at 3200' on July 5, 1939, and cemented with 150 sacks of cement. A show of gas was encountered at 3180' to 85' in sand.

At 3205' to 15' in sand, an estimated 1,000 MCF gas was encountered in sand, and the hole was loaded with salt water to continue drilling. No more shows were logged, except a possible show of oil from 3366' to 3389'; however, between 3200' and 3383' there were several good sand breaks which were carrying gas.

The well was bridged back with gravel from 3439' to 3415' and shot with 140 quarts from 3415' back to 3383'. After shot, the well tested 12,789 MCF gas.

A steel line was run in the hole, and bridge was found at 3297'. The master valve was closed and nothing more was done to the well until it was bought by Western Gas Company.

Otis Pressure Control Company was employed to snub tubing into the hole and Beckman Process, Inc. cleaned the well out to the total depth.

An Exner-Dodge underset packer was set at 3372' with an Otis side-door choke above it and a three-foot perforated nipple below. After unloading the hole, it was found that there was a slight leak around the packer. It

(cont'd)

Well History (cont'd)

WCo. State B #1

is believed that the leak is through the formation, due to the shot, which was close to the packer seat, making it impossible to perfectly seat the packer. It was impossible to raise the packer any without leaving a gas sand below it. Therefore, it was decided that the partial shut-off which existed was the best result that could be obtained under present conditions.

The well was completed as a gas well making 2,500 MCF gas with a light spray of oil. It will be tied in to El Paso Natural Gas Company's line and, if there is enough oil with the gas production, separator and tanks will be installed.

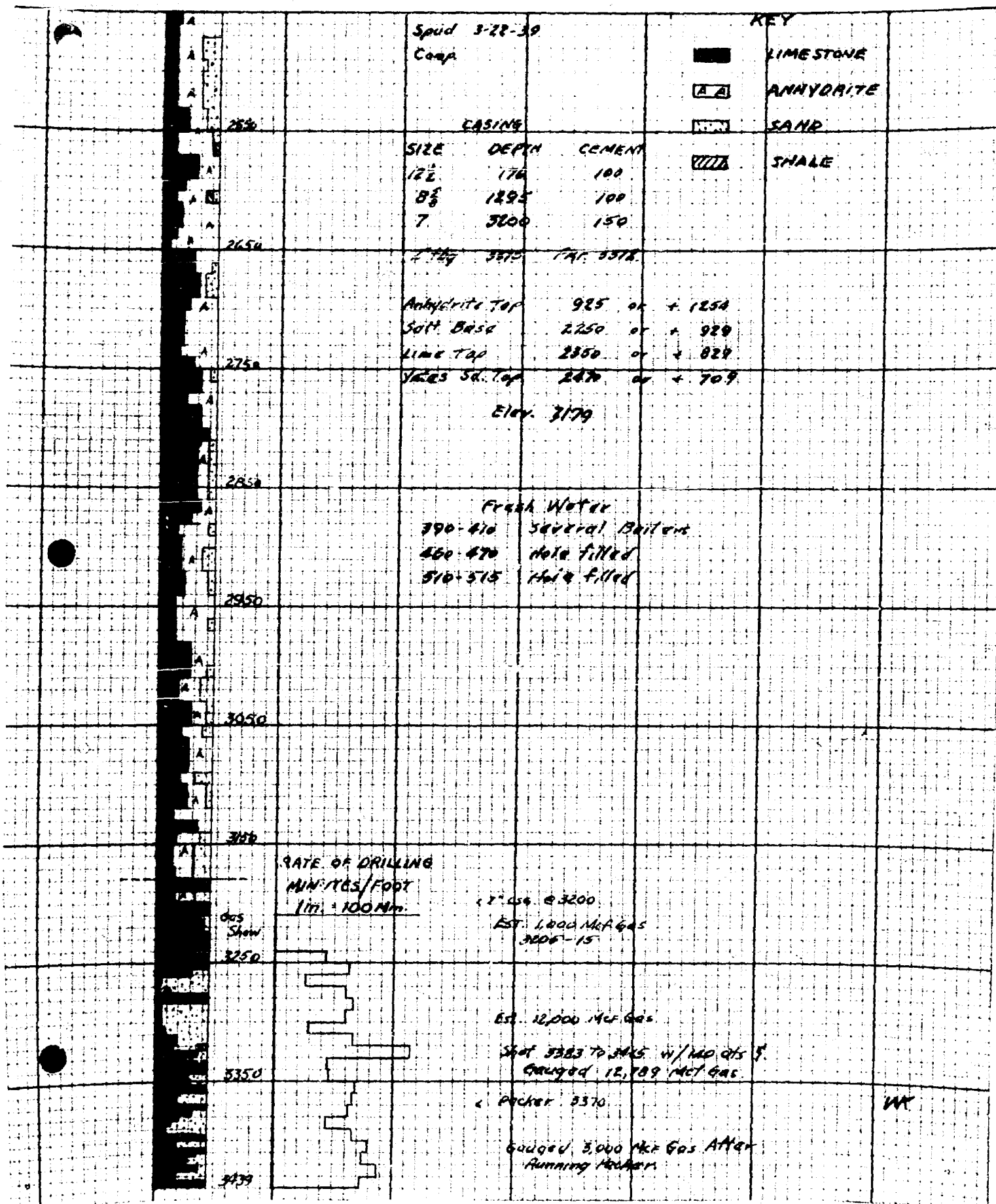
Casing Record:

<u>Size</u>	<u>Depth</u>	<u>Sacks Cement</u>
12-1/2"	176'	100
8-5/8"	1295'	100
7"	3200'	150
2-1/2"	3375'	with Exner-Dodge underset packer at 3372' and lower 3' perforated, and an Otis side-door choke above packer.

Geological Points:

Anhydrite top	925	/	1254
Salt base	2250	/	929
Brown lime top	2350	/	829
Yates sand top	2470	/	709
Elevation	3179	0	

WESTERN GAS CO 'I STATE 'B'



Western Gas Company

Woolworth #1

NE/4 NE/4 of Sec. 17, T-25, R-37

This well was drilled through the Langlie producing zone. The production from this zone was found not to be of commercial value due to the presence of water in the small amount of production obtained. The well was plugged back and perforated in the Yates gas zone and completed as a dry gas well.

It is our opinion that the Yates sand zone in this area is predominantly a gas reservoir and we, therefore, respectfully request that this well be excepted from the gas-oil ratio order.

Attached you will find geological and other pertinent information substantiating this request.

Western Gas Company

Woolworth #1

NE/4 NE/4 of Sec. 17, T-25, R-37

Well History

This well was spudded on Feb. 25, 1939, and completed on May 7, 1939, by Anderson-Prichard Oil Corp. and was later sold to Western Gas Company. The initial flow was 8,080,000 cu. ft. of sour gas.

On Feb. 30, 1939, 1192' of 9-5/8" casing was cemented with 500 sacks of cement. The well was cored from 2901'-21' and from 2953'-73'. At 3000' to total depth, 2-1/2" tubing was run in open hole and the well tested 5,000,000 cu. ft. On Mar. 26, 1939, 3199' of 7" casing was cemented with 300 sacks of cement.

At total depth, 3454', the well flowed 15 barrels of oil per 24 hours. Shows of oil were logged at 3354'-74', 3382'-87', 3394' to 3412', 3416'-21' and 3445'-52', all in sand. The well later tested 17 barrels of fluid per day and 4% water with 200,000 cu. ft.

The well was then plugged back into the casing and perforated with casing ripper.

CORE RECORD

- 2901' to 2921½' - Recovered 16½': 8' saturated sand and 7' sandy shale, spotted saturation; 14% porosity, 0.8 milidarcies permeability.
- 2950' to 2970' - Lime, anhydrite, sand; 17% porosity, 3.0 milidarcies permeability.
- 3081' to 3092' - 10' 7" recovery: 3½' fine grey sand with sweet gas odor; 1½' black shale with sand breaks; 5' fine grey sand with sweet gas odor; 7" grey chert with black shale breaks; 13% porosity 1.0 milidarcies permeability.
- 3100' to 3121' - 19' 1" recovery: 6½' fine grey sand with sweet gas odor; 3½' grey chert and black shale breaks; 9' fine grey sand, sour gas odor, good color; 27.2% porosity and 450.0 milidarcies permeability at 3100' to 08'; 12.1% porosity and 0.6 milidarcies permeability at 3110' to 21'.

WCo. Woolworth #1

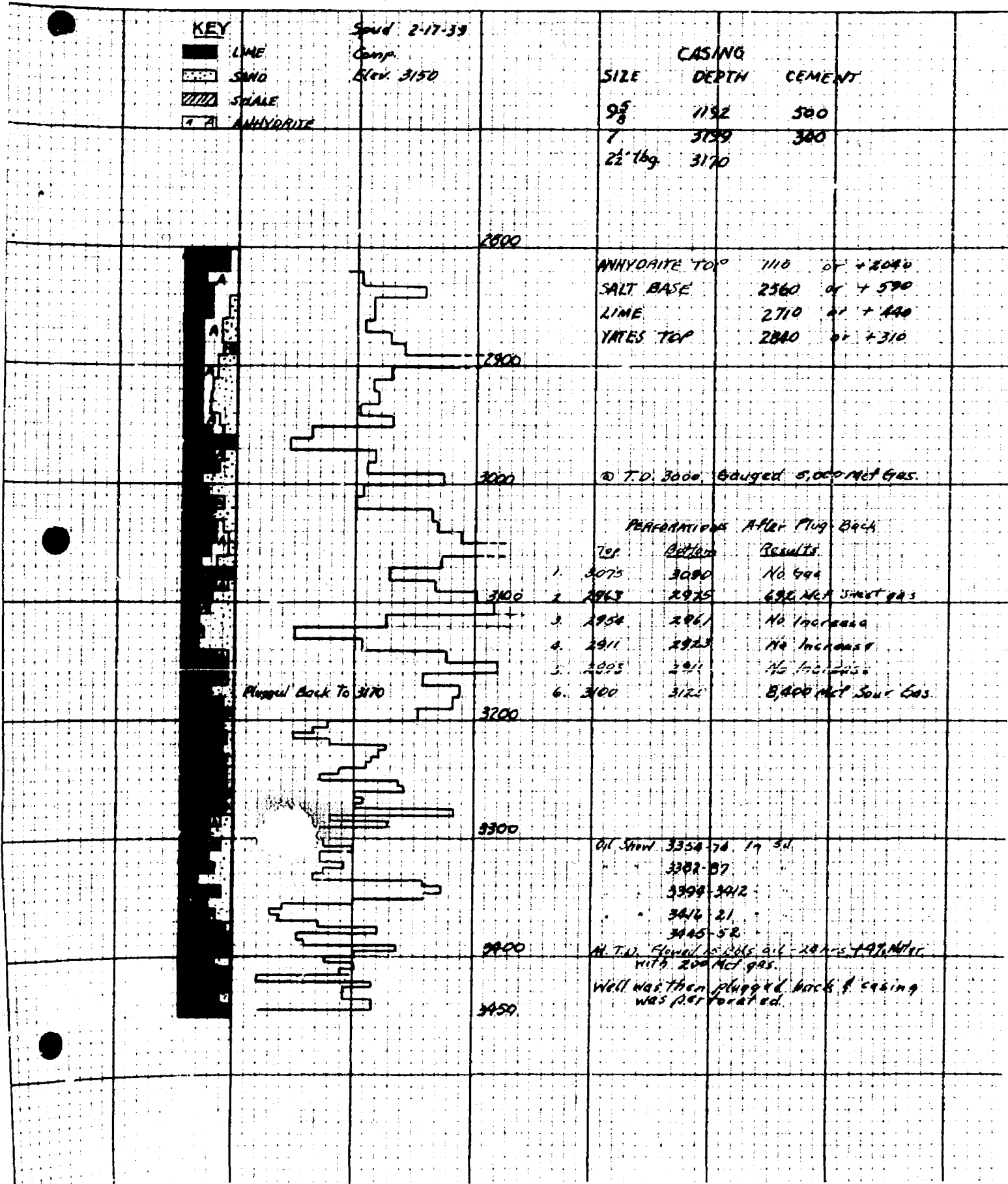
Casing Records:

<u>Size</u>	<u>Depth</u>	<u>Sacks Cement</u>
9-5/8"	1192'	500
7"	3199'	300
2-1/2" tubing at total depth		

Perforation Records:

No gas	3075' to 3090'
692 MCF	2963' to 2975'
692 MCF	2954' to 2961'
692 MCF	2923' to 2911'
692 MCF	2893' to 2911'
8,400 MCF	3100' to 3120'

WESTERN AS CO. #1 WOOLWORTH



Western Gas Company

Wells #1

SW/4 NE/4 of Sec. 6, T-25, R-37

This well was drilled through the Langlie producing zone. The production from this zone was found not to be of commercial value due to the presence of water in the small amount of production obtained. The well was plugged back and perforated in the Yates gas zone and completed as a dry gas well.

It is our opinion that the Yates sand zone in this area is predominantly a gas reservoir and we, therefore, respectfully request that this well be excepted from the gas-oil ratio order.

Attached you will find geological and other pertinent information substantiating this request.

Western Gas Company

Wells #1

SW/4 NE/4 of Sec. 6, T-25, R-37

Well History

The well was drilled and completed as Anderson-Pritchard Oil Corp.'s Wells #9, and is located in the center of the Southwest quarter of the Northeast quarter of Sec. 6-25S-37E. It was purchased by Western Gas Company after completion as a 15,000,000 cu. ft. gas well.

Drilling was commenced June 19, 1939, and was completed Oct. 19, 1939. On June 22nd, 1196' of 9-5/8" casing was cemented with 500 sacks, and on July 9th, 3381' of 7" casing was cemented with 300 sacks of cement.

At total depth, 3540', after a shot of 380 quarts from 3416' to 3505', the well tested 76 barrels of fluid per day, 95% salt water. At plug-back depth of 3530', it tested 27 barrels of fluid, 30% salt water. At plug-back depth of 3395', it was treated with 1000 gallons of acid and tested 20 barrels of fluid, 40% salt water.

The well was then plugged back to 3370' and perforated with 177 shots from 2830' to 3150'. It then tested 15,000,000 cu. ft. of gas.

WCCo. Wells #1

Casing Record:

<u>Size</u>	<u>Depth</u>	<u>Sacks Cement</u>
9-5/8"	1196'	500
7" 7" Master valve, no tubing.	3381'	300

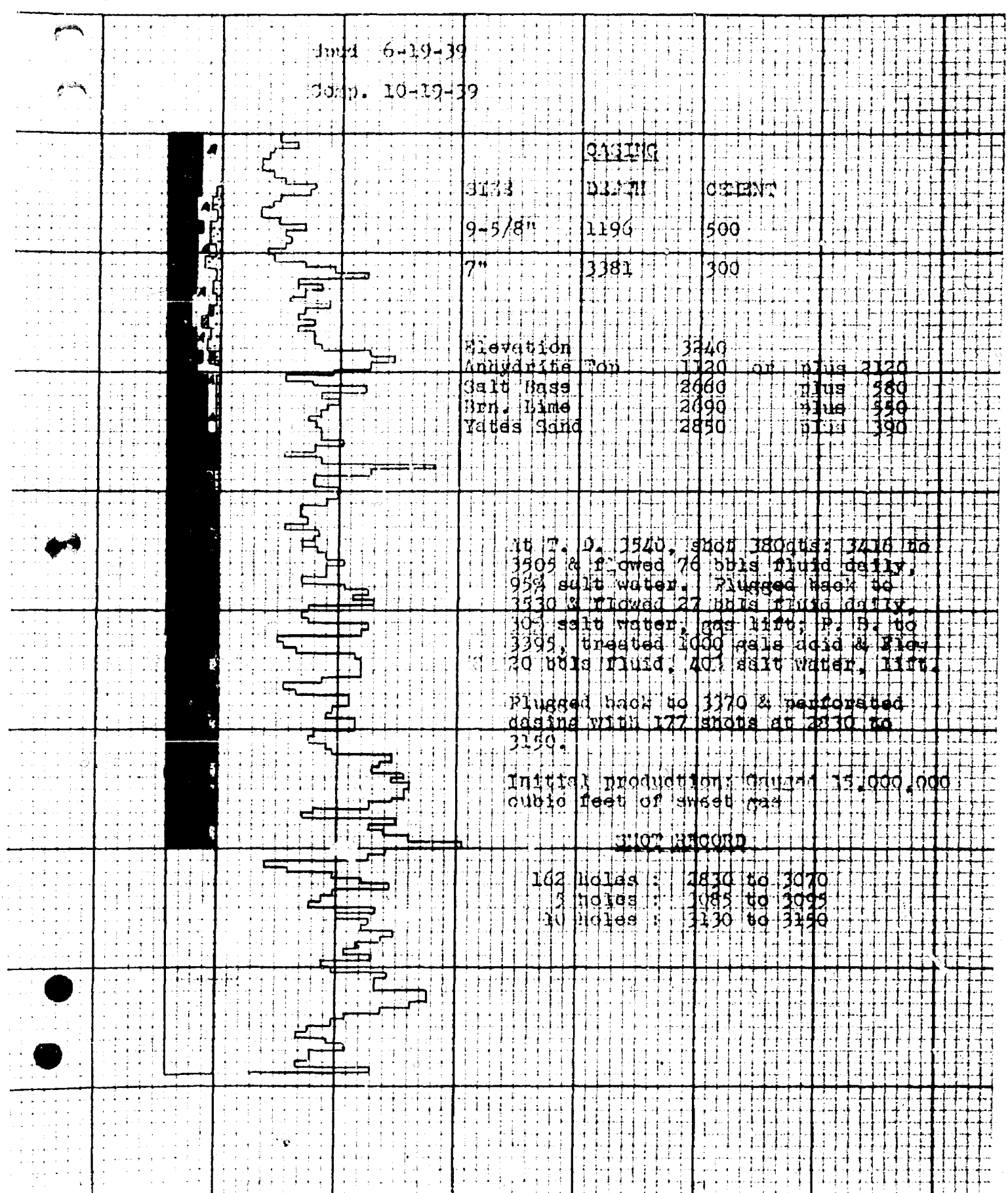
Perforation Record:

162 shots	2830' to 3070'
5 shots	3085' to 3095'
10 shots	3130' to 3150'

Geological Points:

Elevation	3240'	
Anhydrite	1120'	
Salt base	2660'	/ 2120'
Brown lime	2690'	/ 580'
Yates sand	2850'	/ 550'
		/ 390'

WELLS OF THE FIELD



Western Gas Company

Harrison #1

NW/4 NW/4 of Sec. 7, T-25, R-37

This well was drilled through the Langlie producing zone. The production from this zone was found not to be of commercial value due to the presence of water in the small amount of production obtained. The well was plugged back and perforated in the Yates gas zone and completed as a dry gas well.

It is our opinion that the Yates sand zone in this area is predominantly a gas reservoir and we, therefore, respectfully request that this well be excepted from the gas-oil ratio order.

Attached you will find geological and other pertinent information substantiating this request.

Western Gas Company

Harrison #1

NW/4 NW/4 of Sec. 7, T-25, R-37

Well History

This well was completed Mar. 3, 1937, as a 3,600,000 cu. ft. gas well.

An open flow test on Yates sand zone and 7 Halliburton cone packer tests were made on the lower formations.

The well was drilled to 3,558' when sulphur water was encountered and the hole was plugged back to 3,300'.

After plugging back to 3,300', the casing was perforated 17 times from 2870' to 2910' in the Yates gas zone. The well was treated with 3,000 gallons of acid to clean out the perforations and mud that might have been pumped back into the formation during the drilling of the well.

The initial open flow test was 3,600,000 cu. ft. of sour gas.

Tests made on

Western Gas Company's Harrison No. 1

- #1 - 1-28-37. Open flow with drill pipe in hole 2728' to 2990'. Initial show 6,700 MCF and, after 2 hrs., showed 2,400 MCF of sweet gas. (Yates sand)
- #2 - 1-31-37. Halliburton cone packer test from 2990' to 3100'. Showed 300 MCF of sweet gas.
- #3 - 2-3-37. Halliburton cone packer test from 2990' to 3229'. Open 15 min. Showed 200 MCF sweet gas.
- #4 - 2-5-37. Halliburton cone packer test from 2990' to 3338'. Open 15 min. Showed 360 MCF sweet gas.
- #5 - 2-6-37. Halliburton cone packer test from 2990' to 3376'. Open 15 min. Showed 400 MCF of gas and 200' of fluid with no oil. 3366' to 3376' first show of oil in cuttings.
- #6 - 2-12-37. Halliburton cone packer test from 3355' to 3515'. Open 15 min. Showed 200 MCF of sweet gas and 250' of fluid with no oil.
- #7 - 2-13-37. Halliburton cone packer test from 3355' to 3540'. Open 15 min. Showed no increase in gas.
- #8 - 2-14-37. Halliburton cone packer test from 3355' to 3558'. Open 15 min. Showed 360' of mud in pipe and no increase in gas.
- #9 - 2-24-37. Opened up 7" to 9" and after 2 hrs. showed 3,600 MCF of gas.
- #10 - 2-25-37. Open 9 hrs. thru the tubing and by-passed thru 7" to 9". Showed 3,600 MCF of gas, 12 bbl. water per hr. and show of cut oil.

WCo. Harrison #1

Casing Record:

<u>Size</u>	<u>Weight</u>	<u>Depth</u>	<u>Sacks Cement</u>
13" O.D.	40#	198' 6"	125
9-5/8" O.D.	36#	2722' 6"	750
7" O.D.	24#	3353'	100

Geological Points:

Elevation	3171'
Base salt	2660'
Top brown line	2710'
Top Yates	2850'

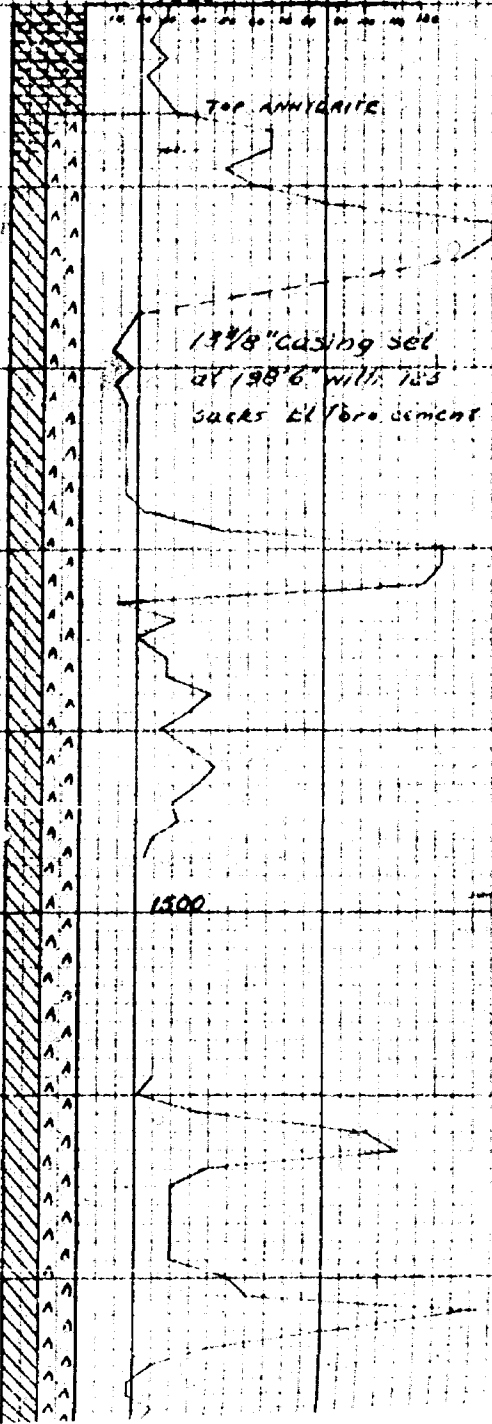
Harrison #1

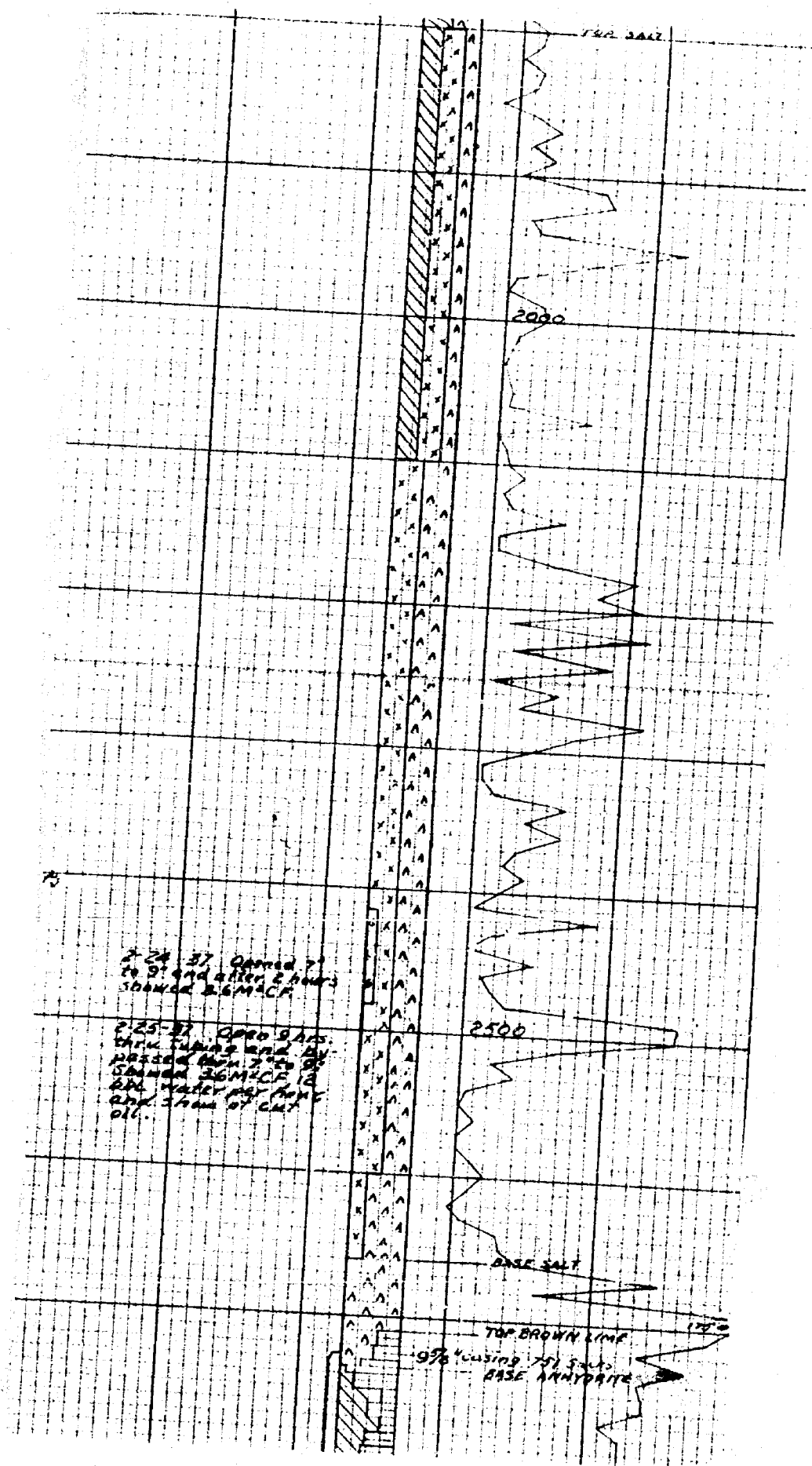
WATERED LUIS LO.
HARRISON #1
NINE TOWNSHIP
SEC 2 T17S R10E S1E
ELEVATION 2000

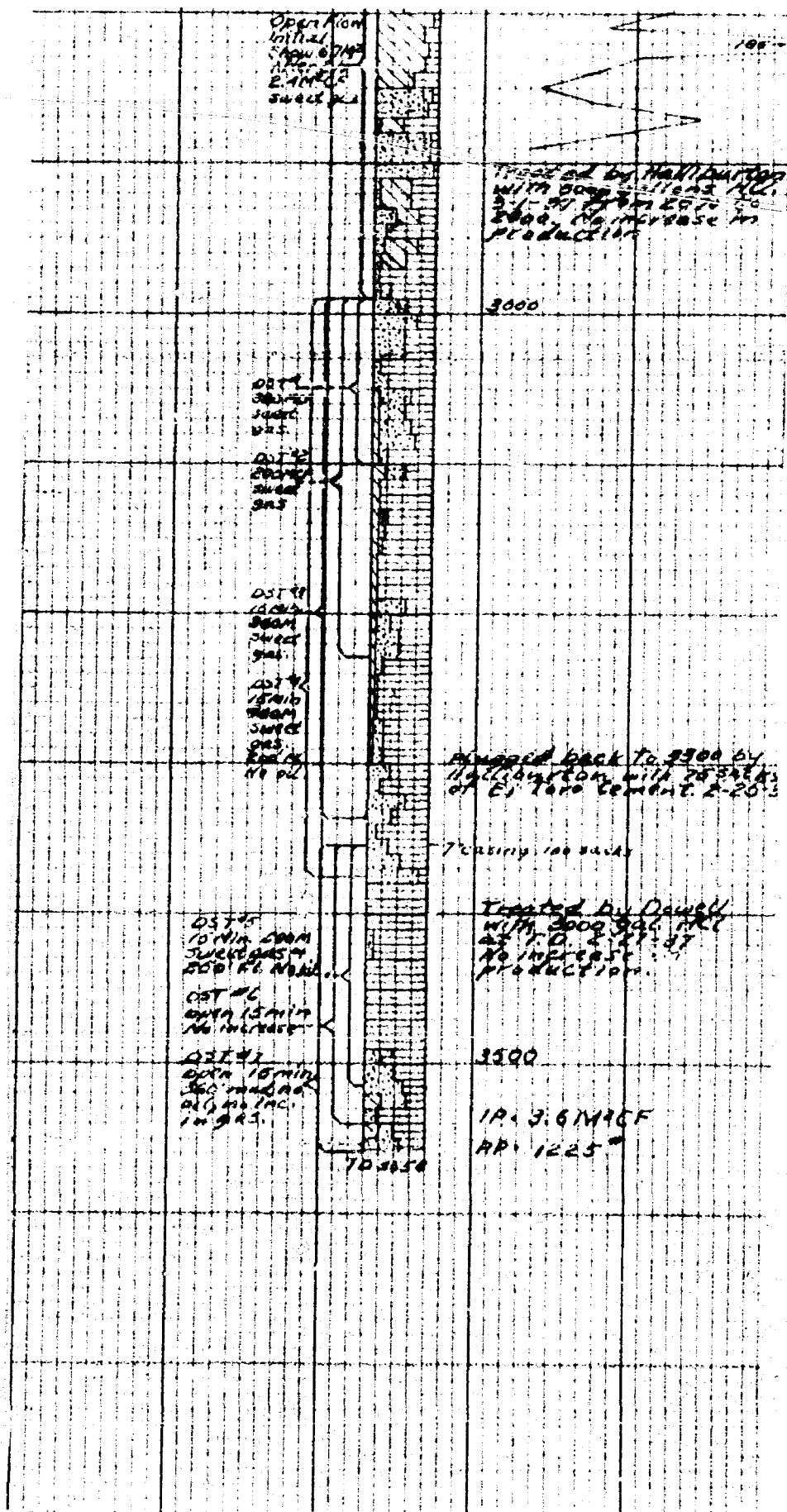
Spud 1-4-37
Comp 5-3-37

DRILLING CURVE
Minutes per 100 ft

- Surface Material
- Shale
- Anhydrite
- Salt
- Gypsum
- Sand
- Limestone







Western Gas Company

Harrison #2 - NW/4 NW/4 Sec. 29, T-24, R-37
Harrison #3 - NW/4 SW/4 Sec. 20, T-24, R-37
Harrison #4 - NW/4 SW/4 Sec. 29, T-24, R-37

These wells are producing gas from sand and sandy lime zones in the upper part of the Queen formation. The oil production in this area is coming from lenticular sands in the lower part of the Queen formation. Structurally these wells have about the same position as do the producing oil wells to the east and are about 10' to 20' higher than the producing oil wells to the south and southeast.

From sample determination and careful study of well data, we have come to the conclusion that the zones producing gas in the above mentioned wells are also carrying gas in the wells to the south and east; however, in the wells to the east the character of the horizon has changed from sand and porous sandy lime to sandy shale which is very tight and in most wells only a small volume of gas is present.

The gas in most of the offset wells is open in the hole and is being used to flow oil which is coming from the lower sand pay. The above condition in most wells cannot be remedied because of various well conditions; however, this situation is causing continuous drainage of gas from the upper sand zone in this area.

In the lower sand zone of the Queen formation the condition mentioned above seems to be reversed and the sand zone is well developed to the south and east and the character changes to tight, impervious and non-productive sandy shale in the area around the Harrison wells.

Due to the fact that only a very slight structural variation is present it is our belief that a gas reservoir exists in this area which is entirely independent from the oil producing zone in the offset wells because of the change in character of the sand zone to the east and the slight dip in the formation to the south and southeast.

Based on information submitted in this report, we respectfully request that the above wells be exempt from the permanent gas-oil ratio order.

Western Gas Company

Harrison #2

NW/4 NW/4 of Sec. 29, T-24, R-37

Well History

The well was spudded on Jan. 3, 1937, by Herschbach Drilling Company with a rotary. A 13" casing was run the next day to 402' and cemented with 270 sacks of cement.

Brown lime was topped at 2760' and 9-5/8" casing was landed at 2765' and cemented with 700 sacks of cement.

In a 15 minute Halliburton drill stem test, 280,000 cu. ft. of gas was gauged at 2820' to 25'. Yates sandstone was topped at 2900', and a drill stem test from 2765' to 3040' showed 18,000,000 cu. ft. of gas on Jan. 23rd. As drilling continued, the following Halliburton drill stem tests were made:

#3	-	3040' to 3150'	-	4,500 MCF gas
#4	-	3150' to 3255'	-	800 MCF gas
#5	-	3255' to 3365'	-	225 MCF gas
#6	-	3255' to 3460'	-	5,700 MCF gas, 200' of drlg. fluid
#7	-	3255' to 3520'	-	No increase
#8	-	3255' to 3595'	-	No increase
#9	-	3495' to 3630'	-	186 MCF gas, 270' fluid
#10	-	3580' to 3650'	-	Small gas, 60' drlg. fluid

At 3356', 7" casing was cemented and drilling resumed.

At total depth, 3650', the initial production was 14,600,000 cu. ft. of gas gauged through open 7" casing; this was on Feb. 8, 1937. In December, 1937, the well started making about 5 barrels of condensate while about 4,000,000 cu. ft. of gas was being taken from the well.

WCo. Harrison #2

Casing Record:

<u>Size</u>	<u>Depth</u>	<u>Sacks Cement</u>
13"	401	270
9-5/8"	2764	700
7"	3356	100

Geological Points:

Top anhydrite	1180'	/	2110
Base salt	2700'	/	590
Top brown lime	2760'	/	530
Top Yates	2900'	/	390
Top pay	3390'	-	100
Elevation	3290'		








WESTERN GAS CO.
 Harrison #2
 NW 1/4 NW 1/4 Sec 29
 T24S R37E
 E1 S290

DRILLING TIME

Minutes to Drill
 10 Feet

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

KEY

-  Surface Material
-  Sand
-  Anhydrite
-  Salt
-  Shale
-  Gypsum
-  Limestone

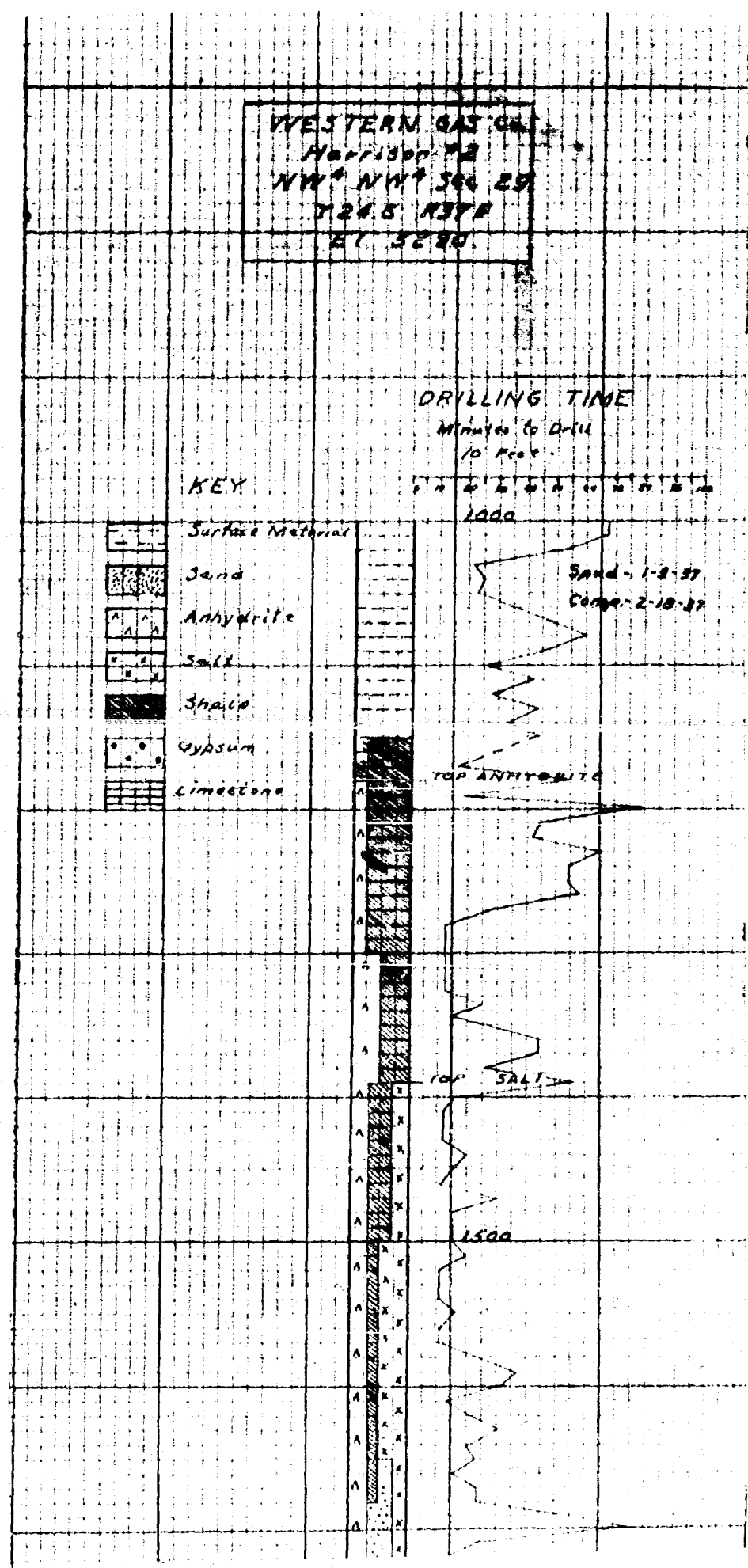
1000

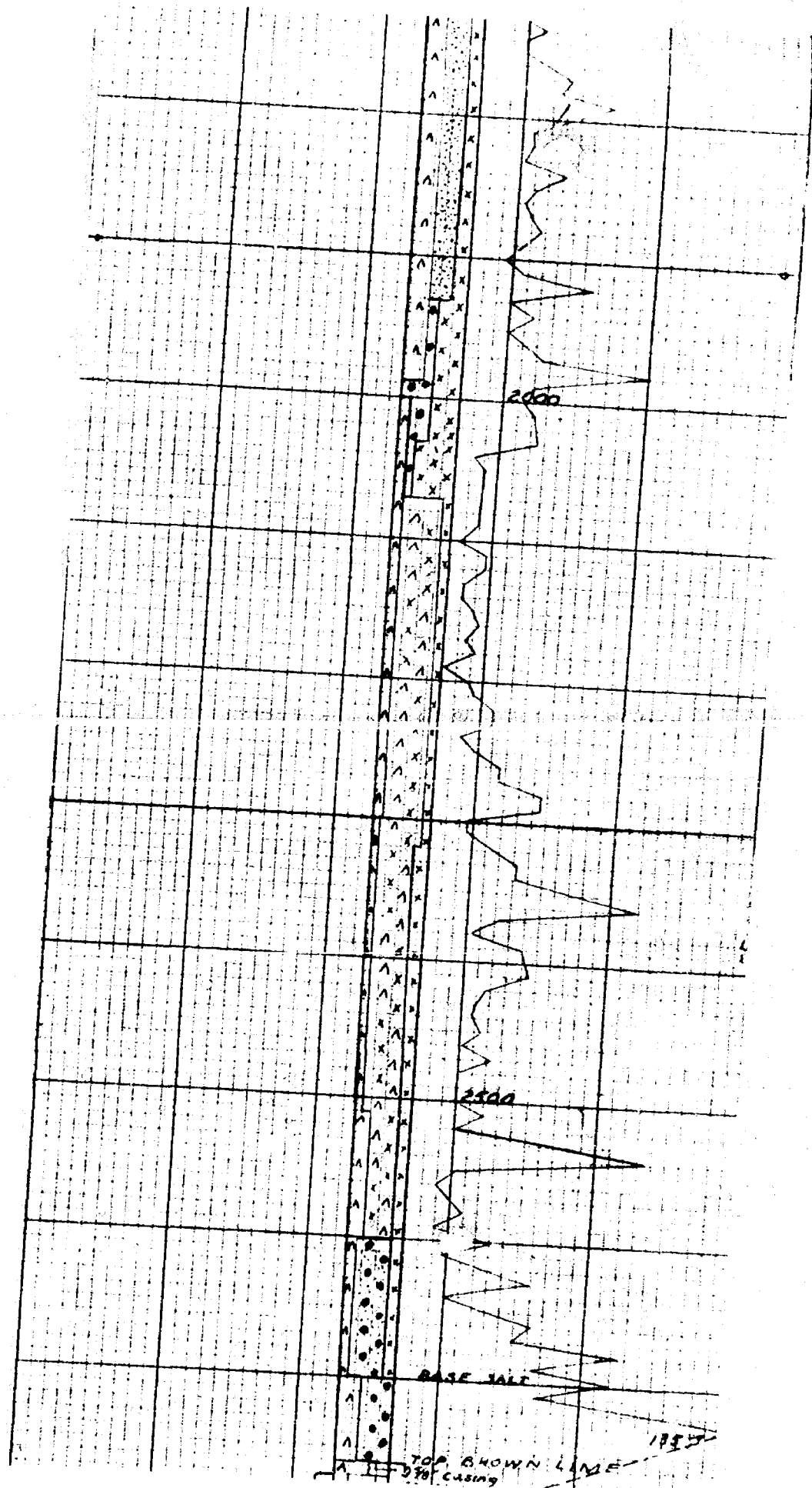
Sand - 1-8-37
 Comp - 2-18-37

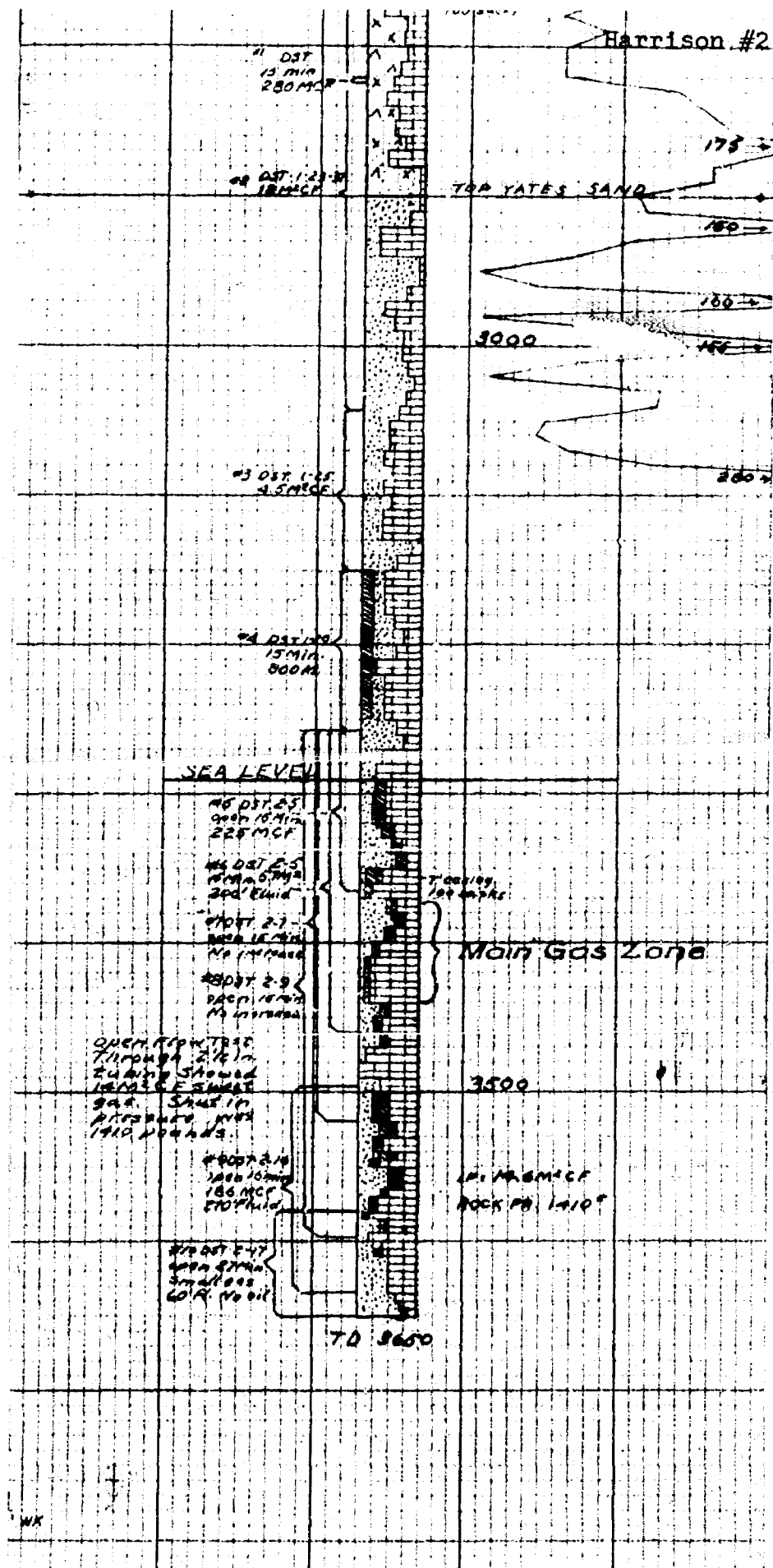
TOP ANHYDRITE

TOP SALT

1500







Western Gas Company

Harrison #3

NW/4 SW/4 of Sec. 20, T-24, R-37

Well History

The well was spudded on May 31, 1937, by Milhoan Drilling Company. At 311', 13" casing was set and cemented with 200 sacks of cement and 9-5/8" casing was set at 2779' and cemented with 700 sacks of cement. Several Halliburton tests were run from 2820' to 3420' and only small amounts of gas were found. A Halliburton test from 3420' to 3470' showed 12,000,000 cu. ft. of gas and 1300# bottom hole pressure.

At 3024', 7" casing was cemented with 100 sacks of cement. The well made one barrel of oil per hour natural and, after acid, Aug. 2, 1937, initial production test was 288 barrels per day. After producing 4229 barrels of oil, the daily production was 100 barrels of fluid per day - 96% sulphur water.

On Sept. 7, 1938, the hole was plugged back to 3595' in the casing and perforated with 20 shots from 3439'-3460'. Initial production after perforation was 14,000,000 cu. ft. of sweet dry gas.

DRILL STEM TESTS

- #1 - Halliburton drill stem test 7-5-37, 2920'-70',
 10 min., 50 MCF, 35' mud.
 Rathole 2970'-85' 7-6-37
 Rathole 3023'-30' 7-7-37
- #2 - Halliburton drill stem test 7-7-37, 2970'-3030',
 13 min., 50 MCF, 50' mud.
 Show of oil 3212'-3215'
 Acid test 3250'-1/2" 7-11-37, tested Okay.
 Rathole 3362'-3472' 7-13-37.
- #3 - Halliburton drill stem test 7-15-37, 3362'-3420',
 16 min., 500 MCF, 90' mud.
 Ream 3362'-72' 7-14-37
 Rathole 3421'-71'
 Ream 3421'-35'
- #4 - Halliburton drill stem test, 3420'-70', open 7 min.,
 12,000 MCF, 22' mud, 1300#.
 Pay 3439'-60'
 Rathole 3435'-72'
 Coring 3472'-89', 11' recovery, 6-1/4 head.
 Coring 3489'-3505', 15' recovery, last 3' sand
 show of oil, 6-1/4 head.
 Ream 3472'-3505' 7-17-37
 Coring 3625'-33', 8' recovery 7-19-37
 Coring 3633'-45', 7' recovery 7-19-37
 Coring 3652'-55', 9' recovery 7-19-37
- #5 - Halliburton drill stem test, 3625'-74', 18 min.,
 487 MCF, 90' fluid 7-23-37.
- #6 - Halliburton drill stem test, 3625'-94', 15 min.,
 487 MCF, 90' fluid - 7-25-37.
 Killing well to acidize 8-2-37.
 Killing well and swabbing 8-3-37.

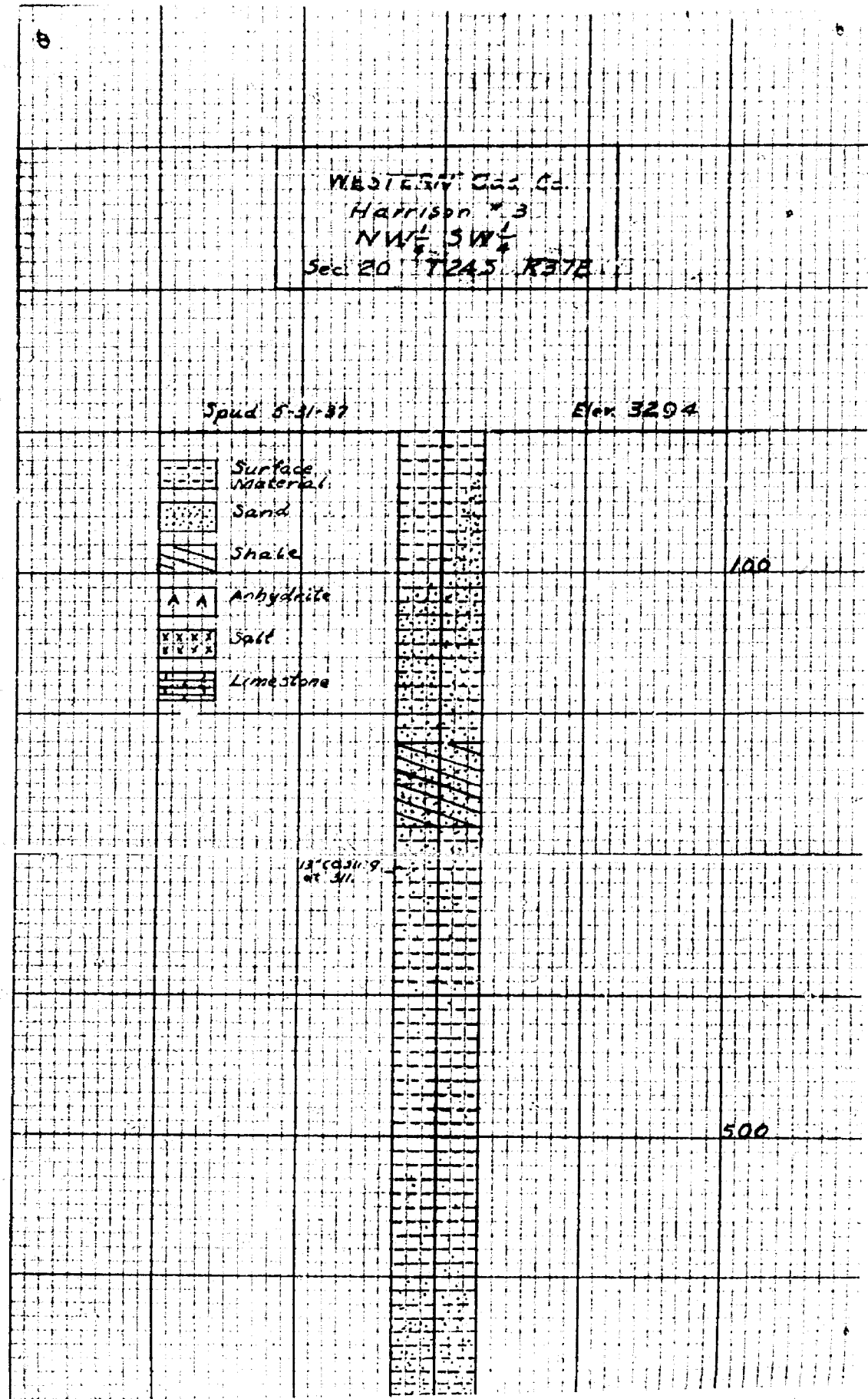
WCo. Harrison #3

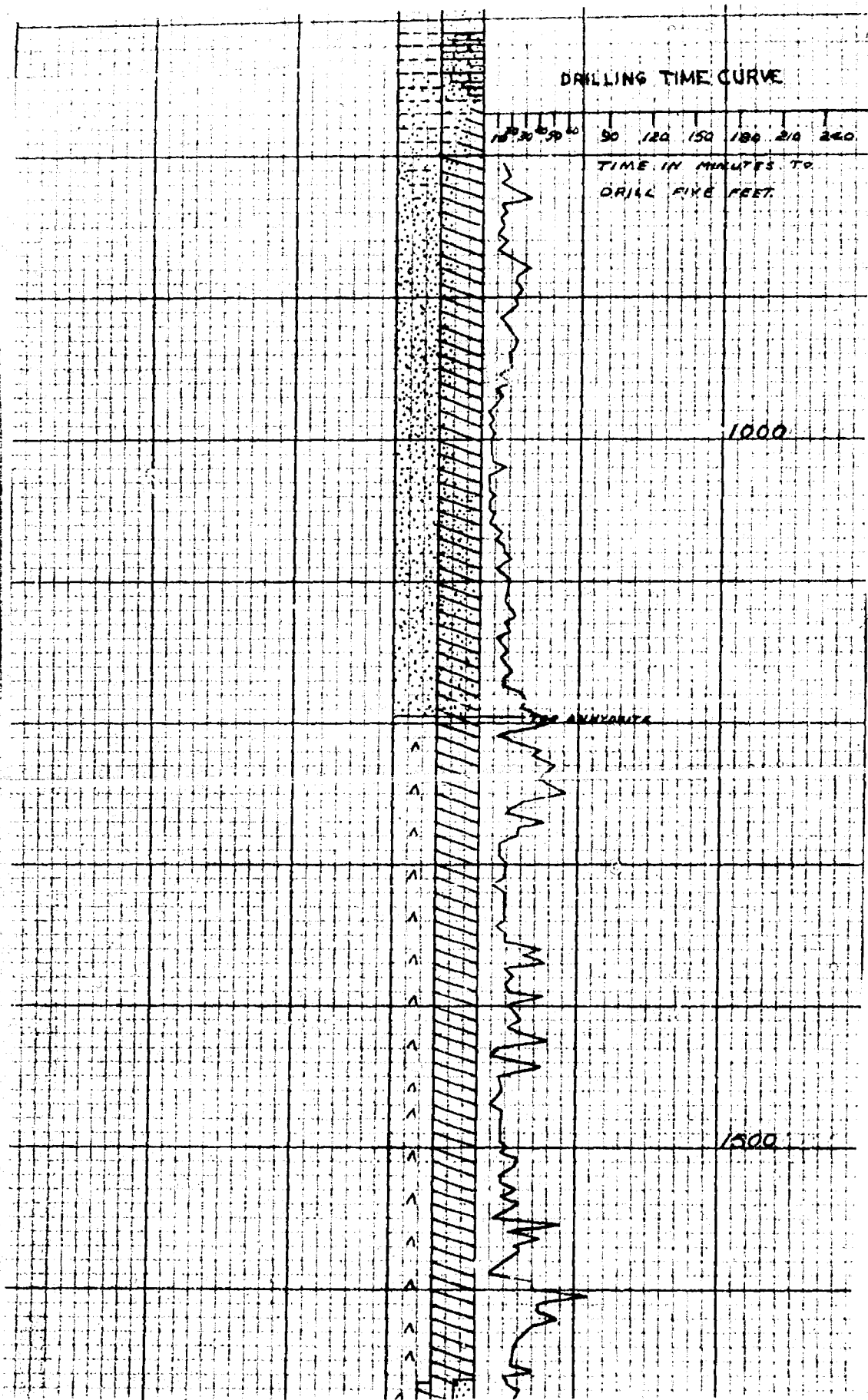
Casing Record:

<u>Size</u>	<u>Depth</u>	<u>Sacks Cement</u>
13" O.D.	311'	200
9-5/8" O.D.	2779'	700
7" O.D.	3624'	100

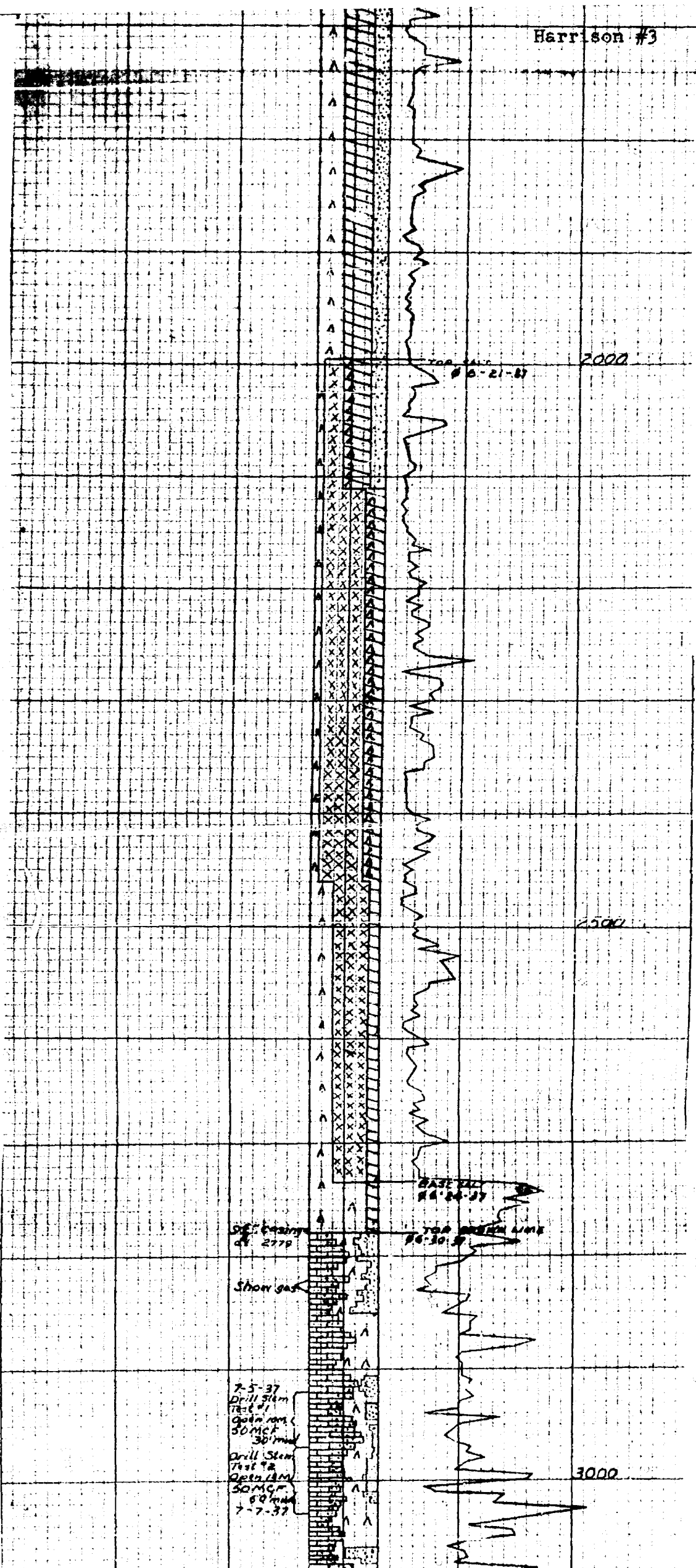
Geological Points:

Surface elevation	3294'
Top anhydrite	1190'
Base salt	2735'
Top brown line	2775'
Top Yates	2910'





Harrison #3



Western Gas Company

Harrison #4

NW/4 SW/4 of Sec. 29, T-24, R-37

Well History

The well was spudded on June 23, 1937, by American Drilling Company, and drilled to total depth with rotary tools. Next day 13" casing was set at 304' with 250 sacks of cement.

On July 5th, 9-5/8" casing was cemented at 2766' with 750 sacks of cement. A split at 1417' was cemented with 500 sacks of cement on July 17th.

Yates sand was topped at 2900' and an open flow test through the casing showed 24,600 MCF gas at total depth, 2980'.

On Aug. 9th, a 3,000 gallon acid treatment at total depth, 3699', failed to show any results. The well was then retreated with 5,000 gallons and grabbed sulphur water with a little oil. It was then plugged back with cement to 3500' and 7" casing was perforated from 3360' to 3400' and from 3465' to 3500'. A 3000 gallon acid treatment was then made and the production was gauged at 6500 MCF of sweet gas.

In November, 1937, the well started making about 5 barrels of condensate with 2,000 MCF of gas daily.

DRILL STEM TESTS

The following results were shown by drill stem tests made on the well:

- #1 - 3360'-3415', open 15 min., 1500 MCF gas, 270' mud.
- #2 - 3409'-3465', open 20 min., no gas, 30' mud.
- #3 - 3465'-00, open 48 min., no gas, 95' mud.
- #4 - 3465'-3525', open 20 min., no gas, 75' mud.
- #5 - 3465'-3550', open 15 min., no gas, 60' mud.
- #6 - 3548'-3598', open 15 min., no gas, 5' mud.

7" casing was run to 3598' and cemented with 100 sacks on 8-7-37. Subsequent Halliburton drill stem tests were as follows:

- #7 - 3598'-3628', open 15 min., no gas, 5' mud.
- #8 - 3598'-3671', open 20 min., no gas, 10' mud.
- #9 - 3598'-3699', open 20 min., no gas, 8' mud.

WCo. Harrison #4

Casing Record:

<u>Size</u>	<u>Depth</u>	<u>Sacks Cement</u>
13"	303'	250
9-5/8"	2766'	750
7"	3598'	100







Geological Points:

Top anhydrite	1150'	/	2120
Base salt	2710'	/	560
Top lime	2670'	/	599
Top Yates	2920'	/	350
Top pay	3360'	-	90
Elevation	3269'		

WESTERN GAS CO.
 Harrison # 4
 NW 1/4 SW 1/4
 Sec. 29 T24S R37E
 Lea County, N. Mex.

Spud 6-25-37

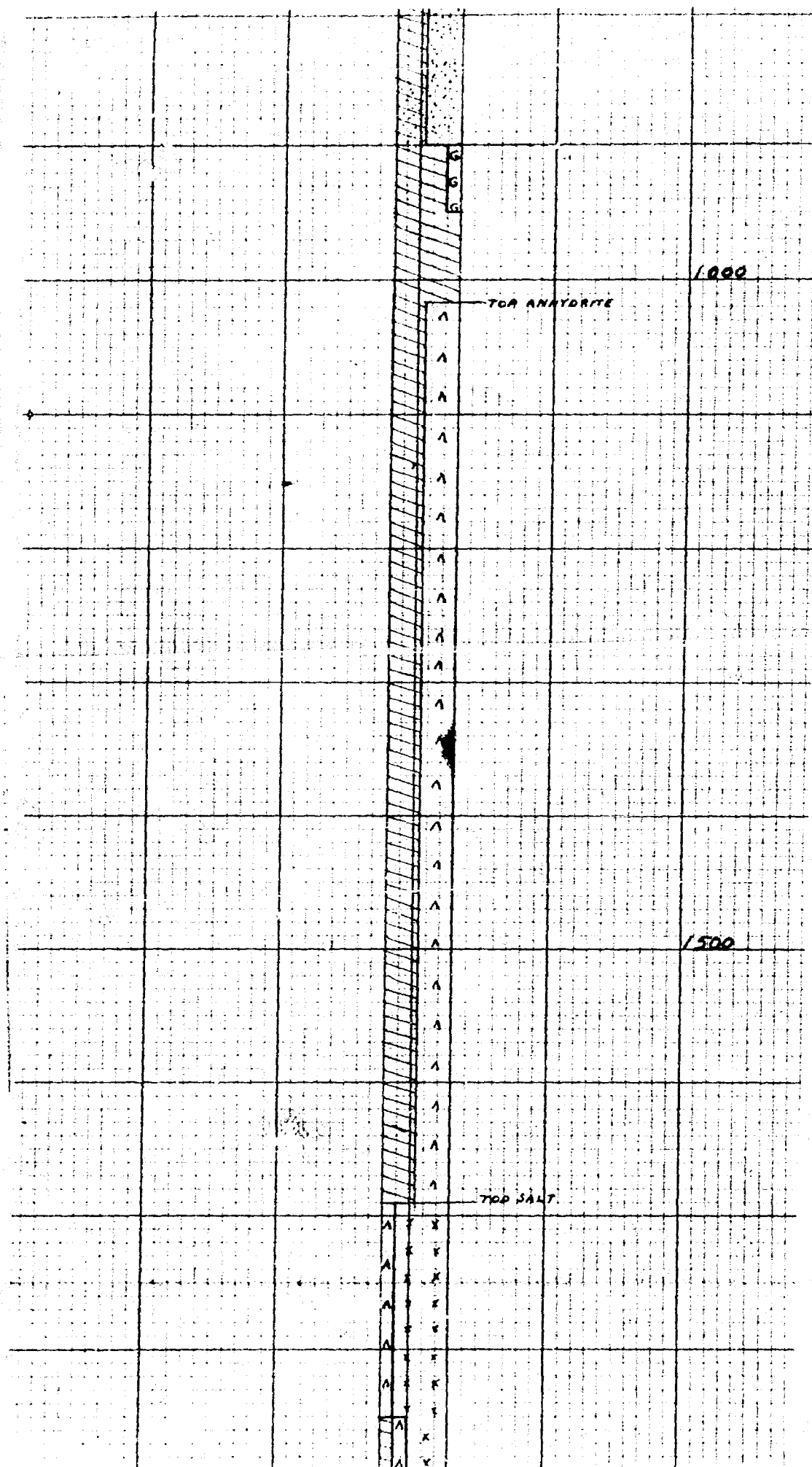
Elev. 3269

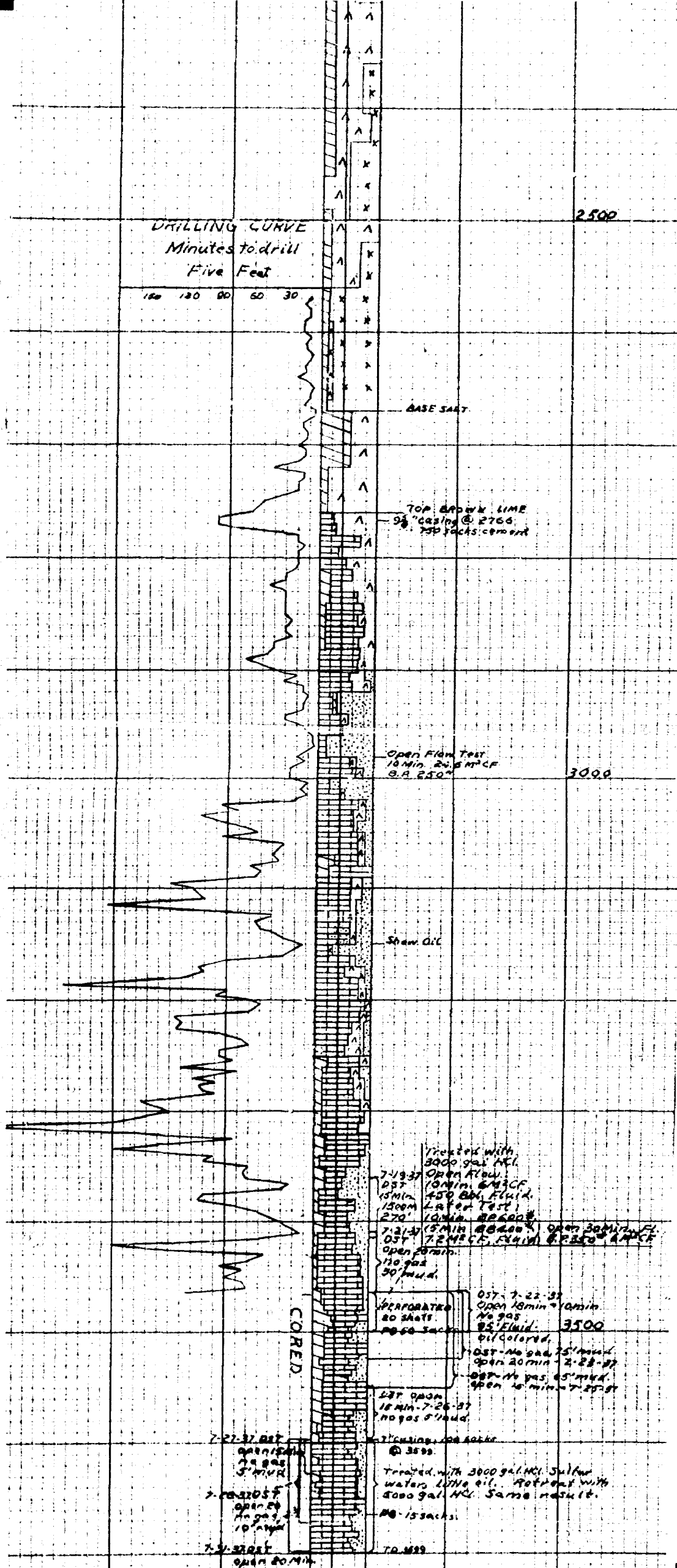
-  Surface Material
-  Sand
-  Shale
-  Anhydrite
-  Salt
-  Limestone

100

3' casing
 303' 0"

500





Western Gas Company

Jim Camp #1

SW/4 SW/4 of Sec. 6, T-24, R-37

The initial production from this well was 16,000,000 cu. ft. of dry sweet gas with the major portion of the gas coming from sands logged from 3270' to 3370' which is predominantly a gas reservoir in this area.

As is indicated from the information above, the major portion of the gas being produced from this well is coming from sands which are approximately 100' higher in the geological section than the oil producing sands and in no way affects the oil producing horizon.

Therefore, we respectfully request that this well be exempt from the permanent gas-oil ratio order.

Western Gas Company

Jim Camp #1

SW/4 SW/4 of Sec. 6, T-24, R-37

Well History

This well was spudded on Apr. 18, 1937, by Milhoan Drilling Company. A 13" casing was set at 272' with 200 sacks of cement, and 9-5/8" casing was set at 2780' and cemented with 700 sacks of cement.

At total depth, 3210', with open hole from 2780' to 3210', the hole was allowed to unload and gas tested 16,000,000 cu. ft. The major part of this gas was coming from the Yates sand zone, 2940' to 3100'.

After testing, the well was conditioned with mud and was drilled to 3250', where 3246' of 7" casing was cemented with 100 sacks of cement.

The well was deepened to total depth, 3656', and, from sample determinations and core descriptions, the bottom 75' to 100' of the hole was carrying sour gas and sulphur water and the hole was plugged back to 3500'.

WCCo. Jim Camp #1

Casing Record:

<u>Size</u>	<u>Depth</u>	<u>Sacks Cement</u>
13"	272'	200
9-5/8"	2780'	700
7"	3246'	100

Geological Points:

Surface elevation	3341'
Top anhydrite	1160'
Base salt	2740'
Top brown lime	2775'
Top Yates sand	2910'

EL PASO NATURAL GAS CO.
JIM CAMP #1
SW 1/4 SW 36 6
T26S R37E
E1.35N1

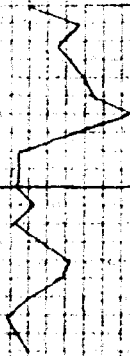
KEY

- Surface
- Shale
- Gypsum
- Sandstone
- Salt
- Limestone

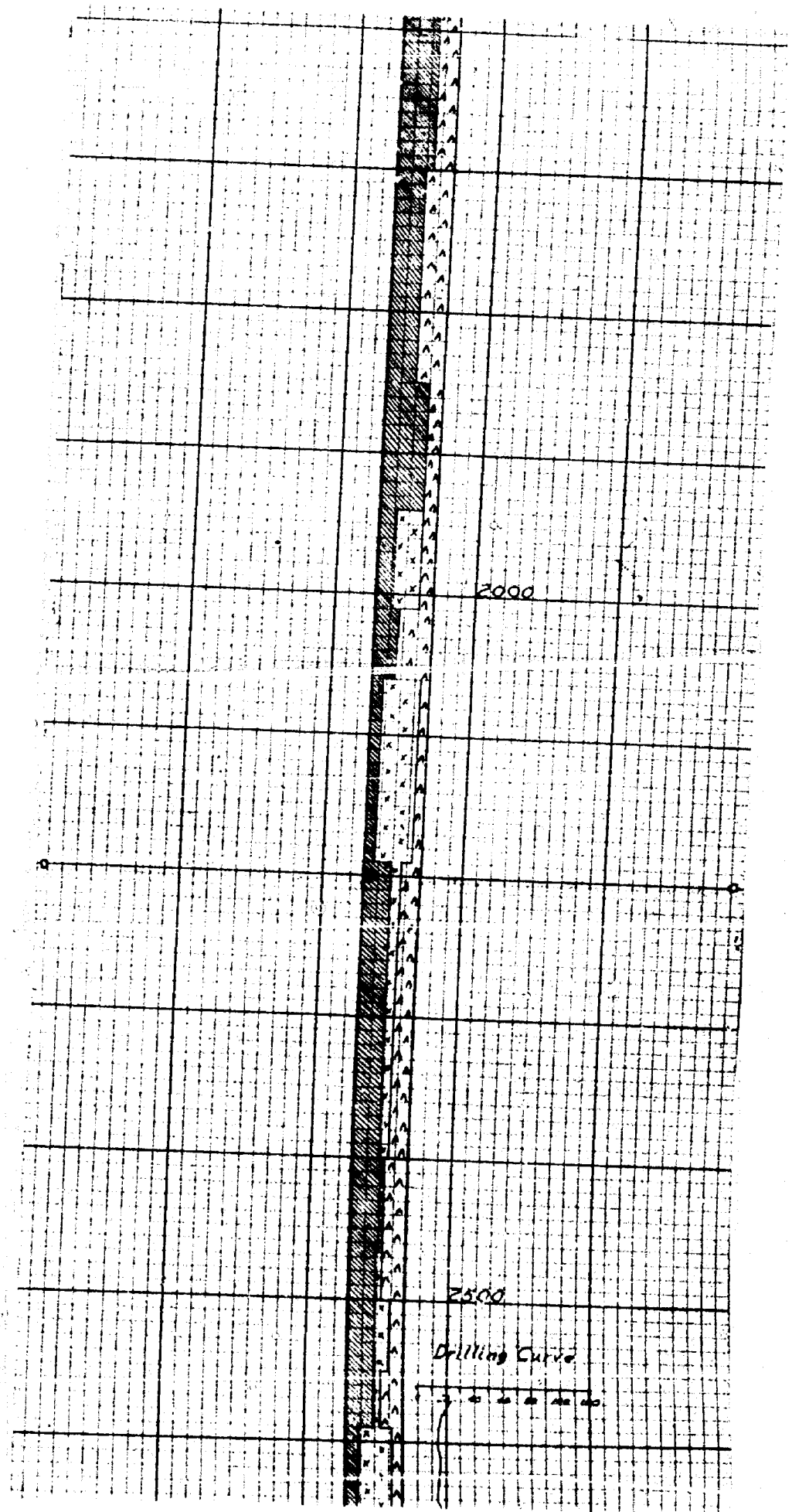
12 1/2" casing
@ 25' with
200 sacks.

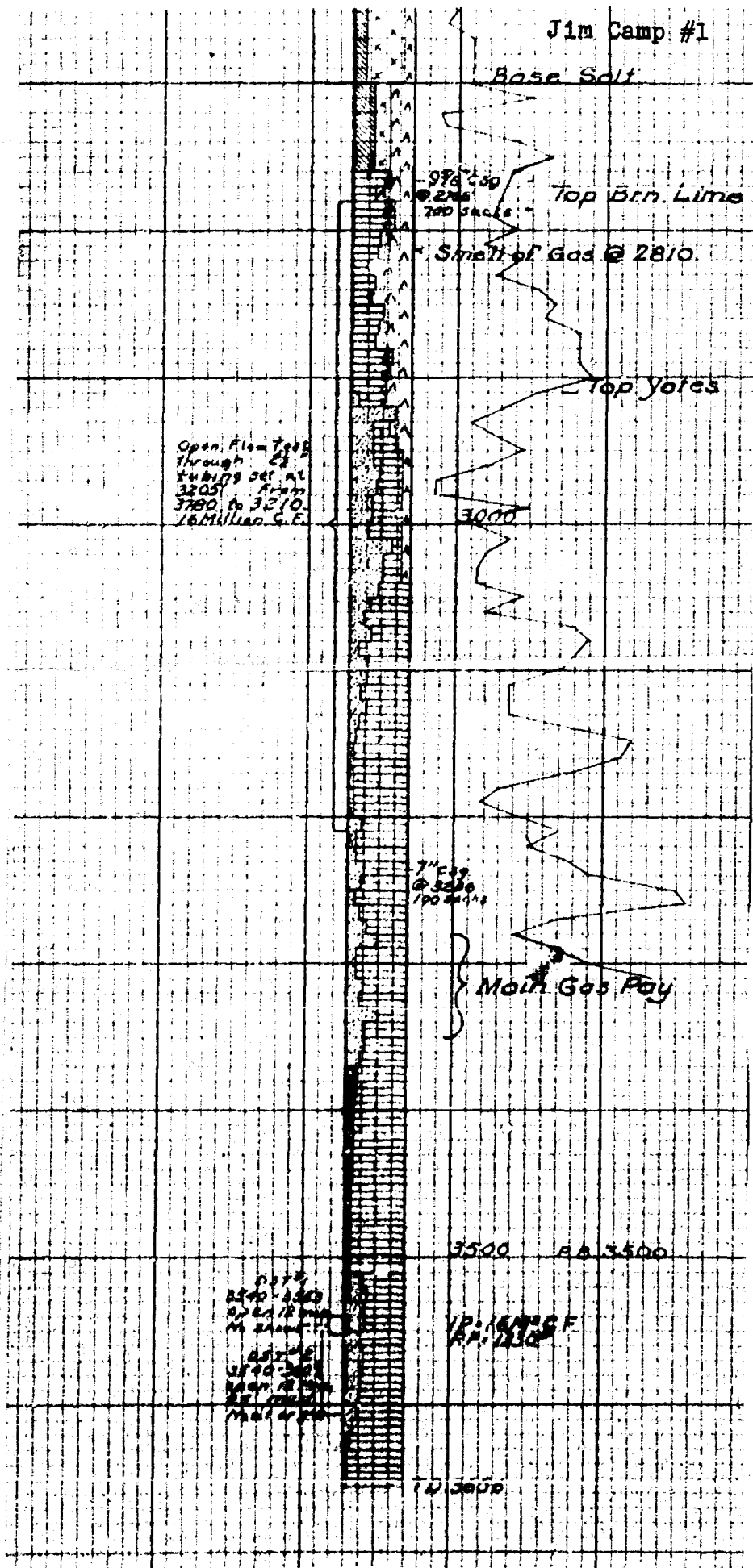
1000

Drilling Curve
M. x 100 ft.



1500





Western Gas Company

Curry #1

SE/4 SE/4 of Sec. 1, T-24, R-36

This well is located on the top of the structure and is the highest well, structurally, of any in this area and the producing zones immediately surrounding this well are predominantly gas. However, the gas being produced from this well may be coming from the same zone that is producing oil in wells to the south, which are lower on the structure. The nearest wells to produce oil from this zone are two or three locations away and in the offset wells this zone is still predominantly gas bearing.

Western Gas Company owns gas rights on approximately 320 acres in this immediate area. It is our belief that we should be granted the right to withdraw an amount of gas equal to the total gas produced plus a volume of gas equal to the reservoir space voided by oil produced from producing oil wells on the acreage on which we have purchased gas rights and also on undeveloped acreage which is being drained by offsetting wells. In no event will Western Gas Company withdraw a daily average amount of gas more than 25% of the open flow capacity of the gas well in question.

If the requested relief is not granted and the well is prorated to a withdrawal of gas equivalent to an amount of gas produced plus a volume of gas equivalent to the reservoir space voided by oil from one oil producing well, or a 40-acre unit, then production from this well would cease to be profitable causing premature abandonment and direct injury to the operator and royalty owner.

Attached you will find all necessary geological data pertinent to this well which substantiates our request for exemption from a permanent gas-oil ratio order.

Western Gas Company

Curry #1

SE/4 SE/4 of Sec. 1, T-24, R-36

Well History

The well was spudded Mar. 18, 1938, by Roy Jeeter with a Fort Worth spudder, and drilled to a total depth of 140'. There, Herschbach Drilling Company moved in rotary equipment and took over all of Western Gas Company's obligations to Roy Jeeter for previous drilling. On Apr. 2, 1938, second-hand 12-1/2" casing was landed at 210' and cemented with 225 sacks of El Toro cement.

On Apr. 14th, new 8-5/8" casing was landed at 2776' and set with 850 sacks of El Toro cement. The well was then drilled to 3385', and a Schlumberger Electrolog was made of the formation. The survey showed first gas at 2914', second at 2955', third at 3103', fourth at 3162', fifth at 3288', and sixth at 3358' to total depth.

On Apr. 24th, 5-1/2" casing was landed at 3310' and set with 20 sacks of El Toro cement. An open flow test on Apr. 29th, from 3310' to 3400', showed 22,000,000 cu. ft. of sweet gas.

Coring was commenced at 3400' and continued to 3575'. On May 2nd, a packer was set at 3402' and the formation was tested to total depth, 3496'. The test showed 8,000,000 cu. ft. of sweet gas. Later the packer was set at 3440' with a total depth of 3575', and tested 10,000,000 cu. ft. of sweet gas through 2-1/2".

The well was drilled from 3575' to 3670' and a Halliburton drill stem test was then made. The tool was open 16 minutes and showed a little sweet gas, 120' of drilling fluid, and a slight show of oil. The drill pipe was then pulled and tubing was run with the packer at 3590'. The well then made 120 barrels of fluid per day for two days.

The well was then cored from 3670' to 3697' and a packer was run; however, the hole was caving and the packer would not go down. Another rubber was used but the packer again stopped too high. Another packer

(cont'd)

Well History (cont'd)

WGCo. Curry #1

was then run into the hole and set at 3590'. The well was swabbed for two days, making about 400 barrels of fluid per day, 50% of which was water and base sediment. Later tests showed 300 barrels of fluid per day, 87% sulphur water and base sediment, and 13% oil. The water contained 11 grains of sulphur per gallon and the oil was 27.2 gravity, corrected.

On May 26th, tubing was pulled out of the hole but the packer pulled in two, leaving 106' of 2-1/2" tubing in the hole from 3590' to 3697'. Halliburton then plugged the hole back to 3550' on top of the tubing in the bottom of the hole. After allowing the cement to set for three days, the top of the plug was found to be at 3538'.

On June 1st, 2-1/2" tubing was run to the plug-back depth with a formation anchor packer on the tubing at 3440'. The tubing was landed at 7:00 P.M. and preparations were made to test the well.

The well unloaded at 4:00 A.M., June 2nd, and, after blowing open and cleaning itself for seven hours, was tested and found to be making 8,000,000 cu. ft. per day. It was allowed to clean itself for another four hours and was again tested and found to be making the same amount of sweet gas.

SPECIAL TESTS MADE ON WELLType and DepthResults

Schlumberger,
2776'-3385'

The temperature curve showed the following bases of gas zones: 2914', 2955', 3103', 3162', 3288', 3358', and gas showing at bottom of hole. Porosity was shown in the following zones: 2780'-2860'; 3012'-39'; 3049'-95'; 3130'-3280', streaks; 3295'-3335', fair; 3335'-3340'; 3350' to total depth.

Open flow,
3310'-3400'

22,000,000 cu. ft. of sweet gas with 200# back pressure.

Halliburton,
3590'-3670'

Showed a small amount of sweet gas, 120' of drilling fluid, and a show of oil.

Tubing-packer,
3402'-96'

With packer at 3402', and total depth 3496', test showed 8,000,000 cu. ft. of sweet gas.

Tubing-packer,
3440'-3575'

With packer at 3440', and total depth 3575', test showed 10,000,000 cu. ft. of sweet gas.

Tubing-packer,
3590'-3670'

With packer at 3590', and total depth 3670', tested two days. Made approximately 120 barrels of fluid per day.

Tubing-packer,
3575'-3697'

Swabbed well 5/18 and 5/19/38. Swabbed and flowed approximately 400 barrels of fluid per day, 50% of which was sulphur water. Then flowed as follows:
 5/20/38 - 450 bbls. of fluid, 40% water.
 5/21/38 - 400 bbls. of fluid, 45% water.
 5/22/38 - 300 bbls. of fluid, 60% water.
 5/23/38 - 300 bbls. of fluid, 72% water.
 5/24/38 - 250 bbls. of fluid, 85% water.
 5/25/38 - 300 bbls. of fluid, 87% water.
 5/26/38 - 260 bbls. of fluid, 87% water.
 5/27/38 - 300 bbls. of fluid, 87% water.
 5/28/38 - 300 bbls. of fluid, 87% water.
 The gravity of this oil was 27.2, corrected, and the water contained 11 grains per gal.

Initial
Production

With Robinson packer set at 3440', and the plug-back depth of 3538', tested 8,000,000 cu. ft. of sweet gas through 2-1/2" upset tubing.

CORE RECORD

- #1 3400'-20' - 6' recovery.
 3400'-02' - Layers of sand and shale.
 3402'-06' - Hard lime.
 6" streaks of porous lime at 3404' with show of oil.
- #2 3420'-39' - 8' recovery.
 3420'-26' - Hard porous lime.
 3426'-27' - Shale.
 3427'-28' - Soft dark sand.
 3428'-29' - Lime.
 Very soft, 3429'-37', probably gas sand.
- #3 3439'-59' - 15' recovery.
 3439'-42' - Hard lime.
 3432'-43' - Porous lime, shale.
 3443'-44' - Porous lime with sand streaks.
 3444'-48' - Hard lime.
 3448'-51' - Sand with show of oil and gas.
 3449'-51' - Hard lime.
 3451'-53' - Hard lime with sand and shale streaks.
- #4 3459'-76' - 10' recovery.
 3459'-63' - Hard lime.
 3463'-64' - Lime with streaks of shale.
 3464'-65' - Sand with show of oil and gas.
 3465'-69' - Lime with sand and shale streaks.
- #5 3476'-84' - 9' recovery.
 3476'-84' - Lime with shale streaks and sand breaks.
- #6 3484'-96' - 12' recovery.
 3484'-88' - Lime, shale streaks.
 3488'-90' - Sandy lime.
 3490'-92' - Lime with shale streaks.
 3492'-95' - Sand with show of oil and gas.
 3495'-96' - Lime.

(cont'd.)

Core Record (Cont'd.)

- #7 3506'-26' - 16' recovery. (SLM 3496'-3506')
- 3506'-07' - Lime.
- 3507'-09' - Sand with show of oil.
- 3509'-10' - Sandy lime.
- 3510'-11' - Sand with show of oil.
- 3511'-13' - Lime.
- 3513'-15' - Hard sand with show of oil.
- 3515'-19' - Lime with sand streaks.
- 3519'-20' - Sand with show of oil.
- 3520'-22' - Lime with show of dead oil.
- #8 3526'-46' - 16' recovery.
- 3526'-27' - Sand with show of oil and gas.
- 3527'-33' - Lime.
- 3533'-34' - Shale.
- 3534'-35' - Lime.
- 3535'-37' - Sandy lime.
- 3537'-40' - Lime with shale streaks.
- 3540'-43' - Sand with show of oil and gas.
- 3543'-44' - Sandy lime.
- Good show bottom 4' of core.
- #9 3546'-66' - 9' recovery.
- 3546'-50' - Sandy lime.
- 3550'-52' - Lime.
- 3552'-54' - Sandy lime with show of oil and gas.
- 3554'-55' - Lime.
- #10 3566'-78' - 9' recovery.
- 3566'-68' - Sandy lime.
- 3568'-69' - Lime.
- 3569'-70' - Sand with show of oil.
- 3570'-73' - Lime.
- 3573'-75' - Sand with show of oil and gas.
- #11 3672'-82' - 2' recovery.
- 3672'-2 1/2' - Porous lime.
- 3672 1/2'-74' - Hard lime with shale streaks.
- #12 3682'-97' - 1' recovery.
- 3682'-2 1/2' - Hard lime.
- 3682 1/2'-83' - Porous hard lime showing dark heavy oil.

Casing Records:

<u>Size</u>	<u>Depth</u>	<u>Amount</u>	<u>Plus Threads</u>	<u>Charged</u>
13"	210'	193'5"	2"	195'5"
8-5/8"	2776'	2761'	18'	2779'
5-1/2"	3310'	3300'	20'	3320'
2-1/2"	3538'	3530'	24'	3660'

(106' cemented in bottom of hole)

Geological Points:

Surface elevation	3344'
Top anhydrite	1190' or 2154'
Top salt	1300' or 2044'
Base salt	2730' or 614'
Top brown lime	2760' or 584'
Top Yates sand	2890' or 454'

Curry #1

WESTERN GAS CO.

11 CURRY

SE-SE 1-24-56

ELEV 5544

KEY



1000

Spud - 8-18-56
Comp. 5-2-56

15' COR. @ 210'
WITH 225 GAX
DRILLING TIME
TEN FOOT
INTERVAL

W.H.

MINUTES

0 20 40 60 80

TOP SALT

1000

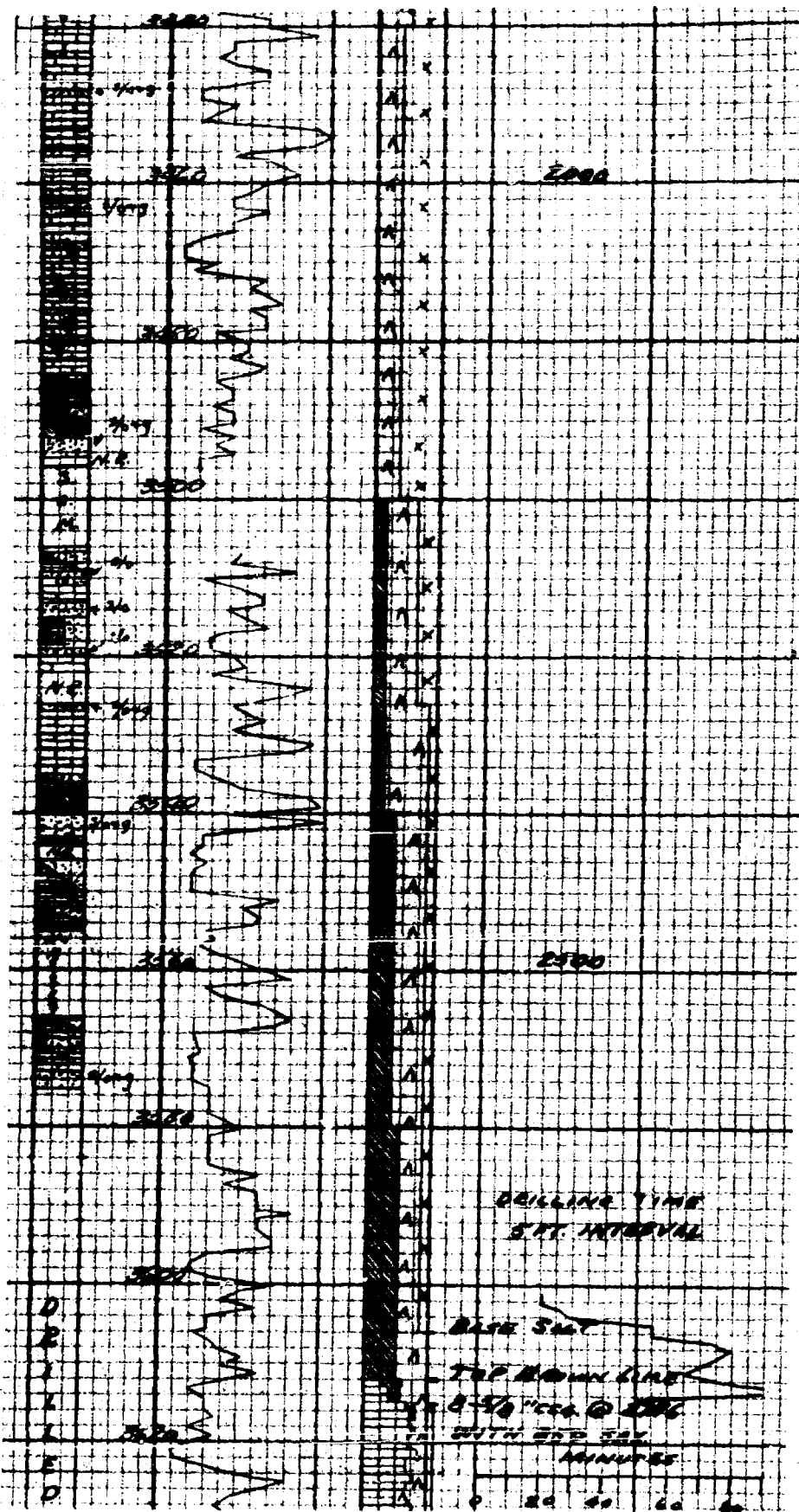
CORING TIME
1 FOOT
INTERVAL
MINUTES

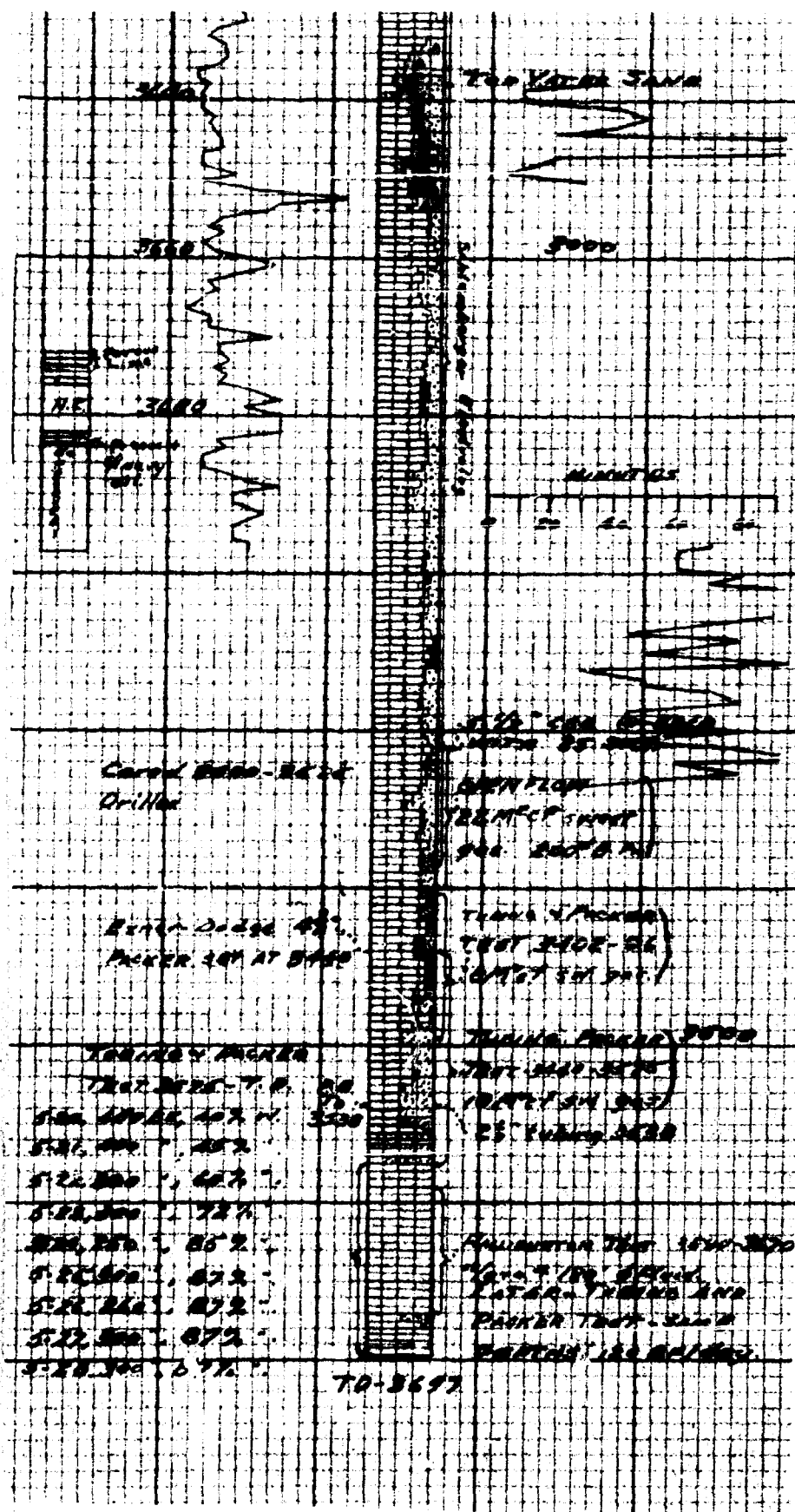
COFF

0 10 20 30 40 50



5520





Western Gas Company

Guthrie #1

SW/4 SE/4 of Sec. 34, T-23, R-36

From the presented information, it is evident that the gas in this well is coming from 3431' to 3531', which is approximately 50' higher in the section than the oil producing zone to the west which is a lime pay. Therefore, the withdrawal of gas in no way affects the production of oil and we request that this well be exempt from the permanent gas-oil ratio order.

Western Gas Company

Guthrie #1

SW/4 SE/4 of Sec. 34, T-23, R-36

Well History

The well was spudded Dec. 19, 1936, by Oilwell Drilling Company's rotary, and was operated by Shell Oil Company until after its completion Feb. 17, 1937.

A 12-1/2" surface casing was run to 271' and cemented with 200 sacks of cement. A 9-5/8" salt string was cemented at 1380' with 400 sacks of cement. The production string, 7", was run 200' below the top of the Yates sand and cemented at 3300' with 275 sacks of cement. As drilling continued, Halliburton drill stem tests were made as follows:

- #1 - 3431'-3531', 6,600 MCF gas, 100' drlg. mud, open 18 min., 3/4" choke.
- #2 - 3526'-3581', 1,220 MCF gas, 45' mud, open 25 min.
- #3 - 3581'-3606', failed.
- #4 - 3582'-3606', 6' drlg. mud, 18 min.
- #5 - 3582'-3653', 5' drlg. mud, 15 min.
- #6 - 3582'-3678', 5' drlg. mud, 15 min.
- #7 - 3582'-3703', 5' drlg. mud, 20 min.
- #8 - 3582'-3728', 5' drlg. mud, 15 min.
- #9 - 3582'-3778', 5' drlg. mud, 20 min.
- #10 - 373'-3828', 10' drlg. mud, 20 min.
- #11 - 3773'-3878', 60' drlg. mud, 15 min.
- #12 - 3773'-3928', 3030' sulphur water, open 20 min.

Upon reaching total depth, 3928', where 3030' of sulphur water rose in the drill stem, the well was plugged back to 3780', and completed as a gas well by Shell Oil Company. It was then sold to El Paso Natural Gas Company and was later taken over by Western Gas Company. The initial production, gauged through open 7" casing, was 24,192,000 cu. ft. of sour gas.

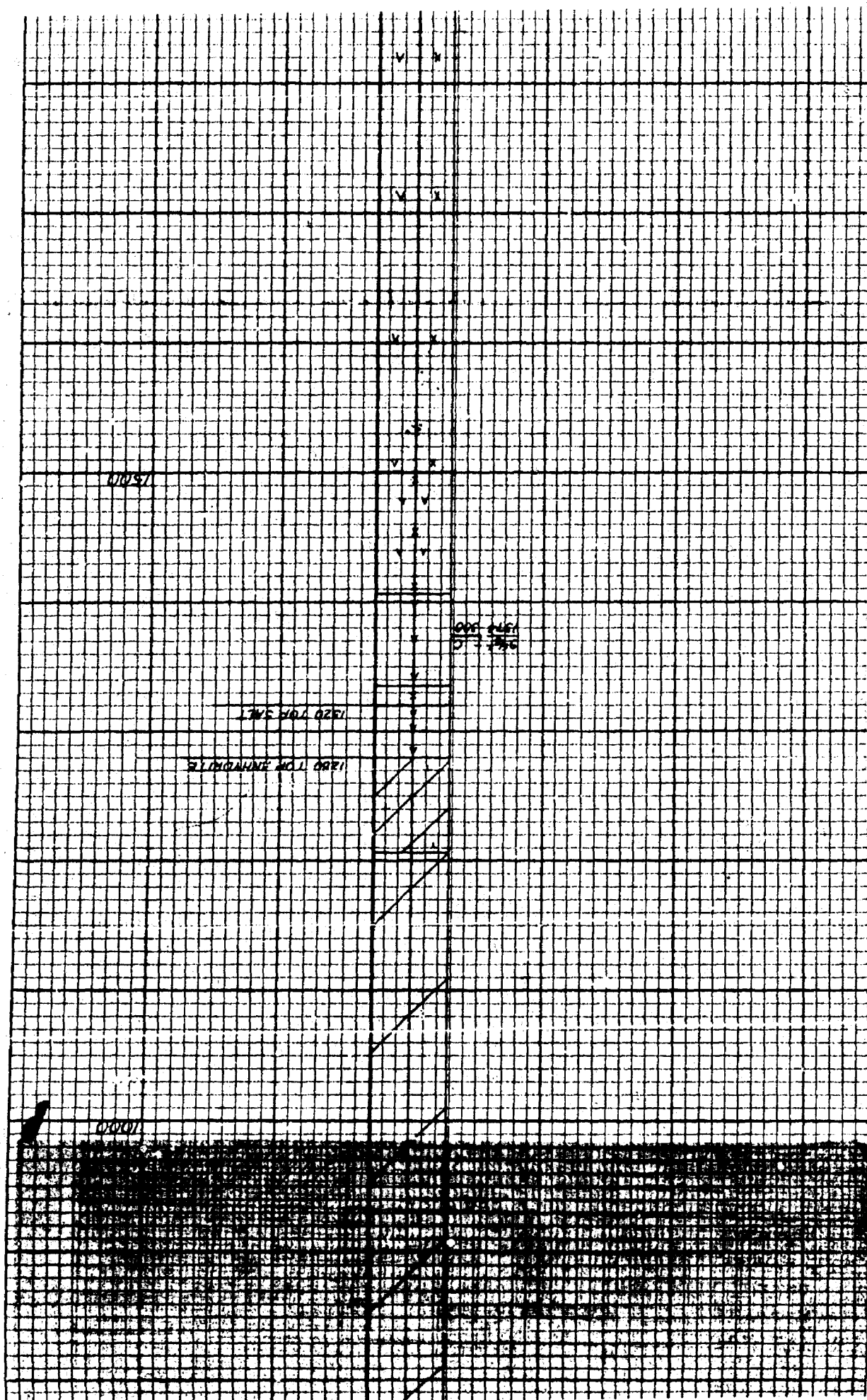
WCo. Guthrie #1

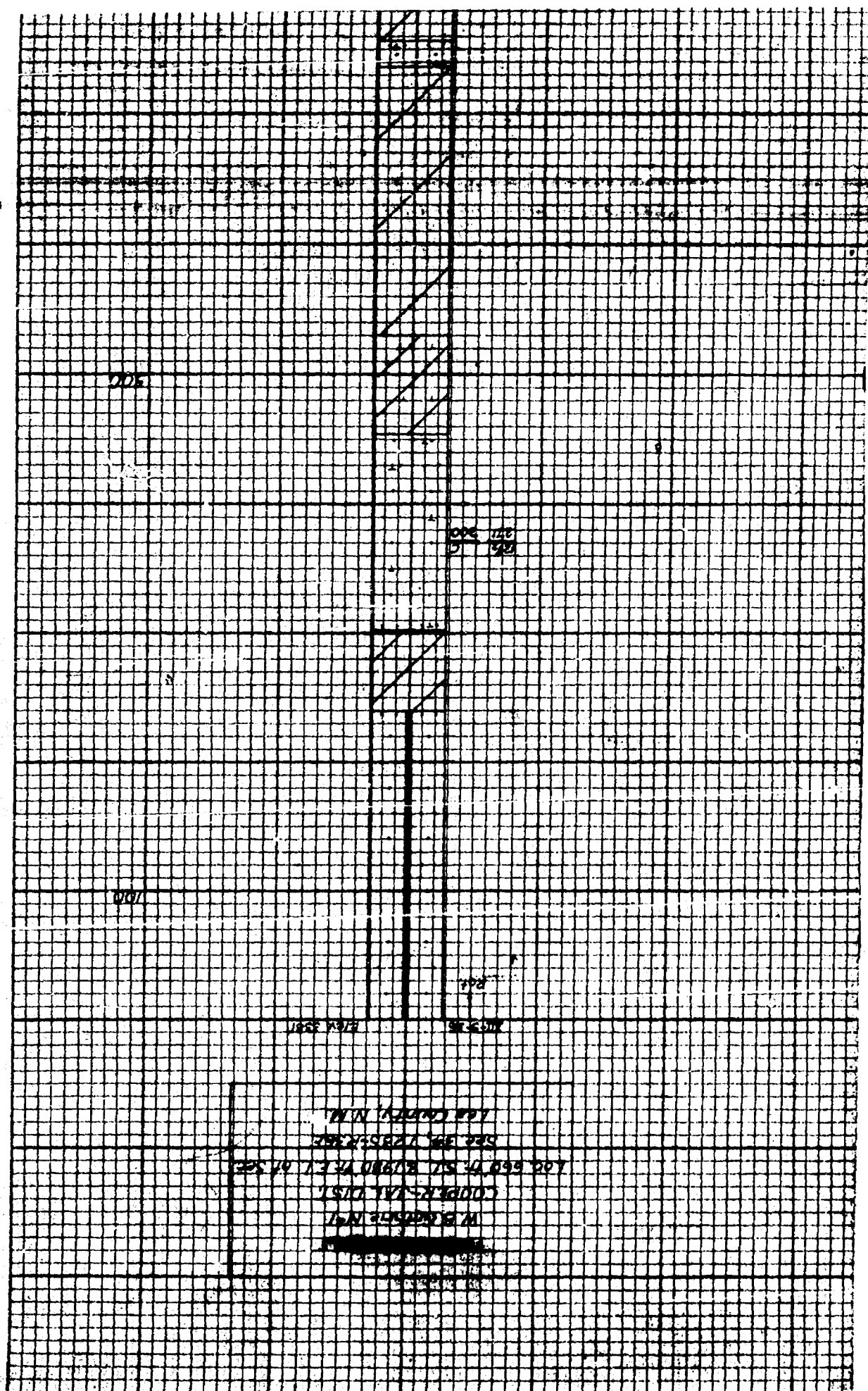
Casing Record:

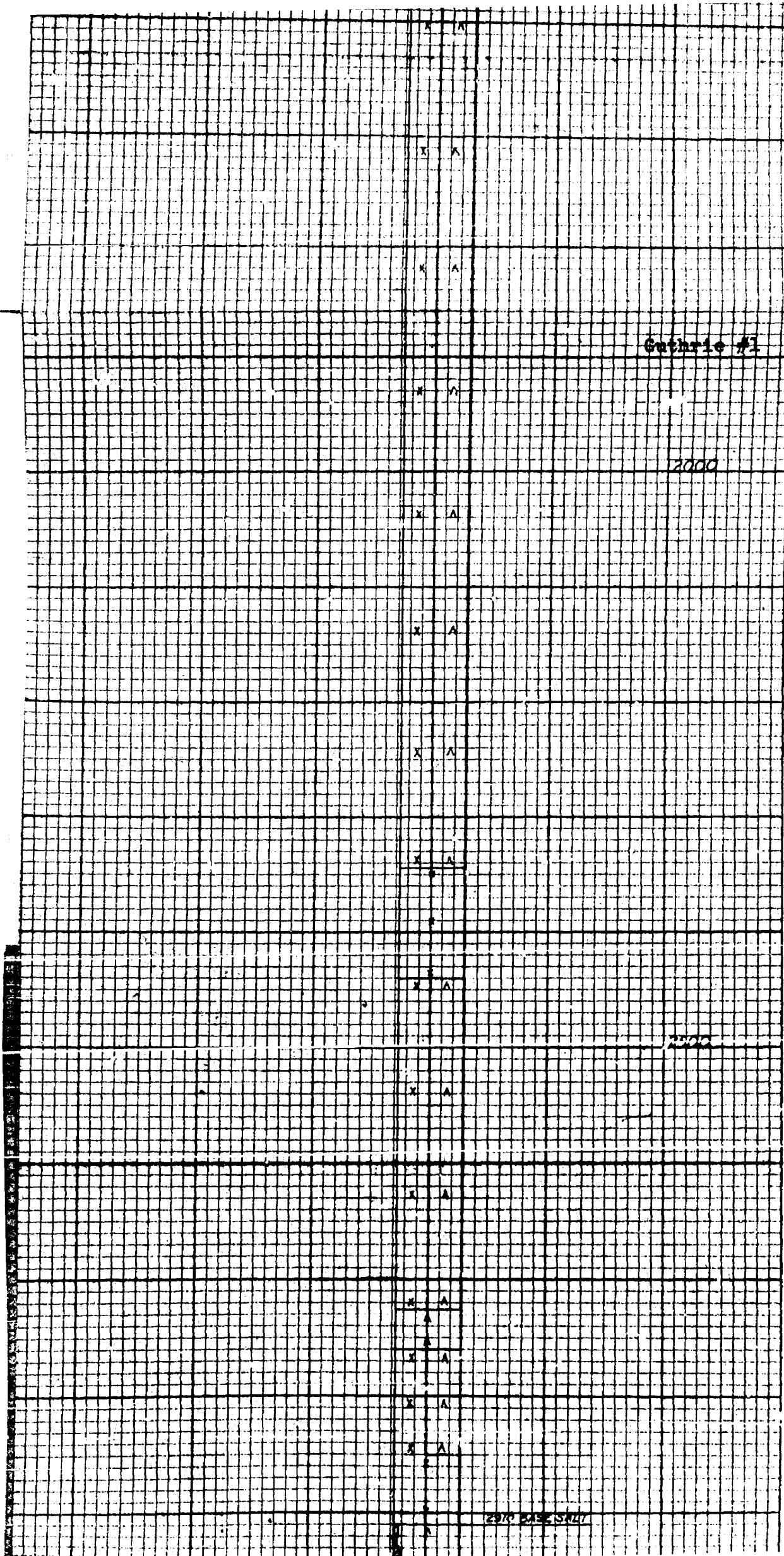
<u>Size</u>	<u>Depth</u>	<u>Sacks Cement</u>
12-1/2"	271'	200
9-5/8"	1374'	300
7"	3300'	275

Geological Points:

Surface elevation	3381'	
Top anhydrite	1280'	/ 2100
Top salt	1320'	/ 2060
Base salt	2910'	/ 470
Top lime	2980'	/ 400
Top Yates	3100'	/ 280







GRAPH 2

Western Gas Company

Matkins #1

SE/4 SE/4 of Sec. 15, T-23S, R-36E

This well was drilled through the Langlie producing zone. The production from this zone was found not to be of commercial value due to the presence of water in the small amount of production obtained. The well was plugged back and perforated in the Yates gas zone and completed as a dry gas well.

It is our opinion that the Yates sand zone in this area is predominantly a gas reservoir and we, therefore, respectfully request that this well be excepted from the gas-oil ratio order.

Attached you will find geological and other pertinent information substantiating this request.

Western Gas Company

Matkins #1

SE/4 SE/4 of Sec. 15, T-23, R-36

Well History

The well was spudded Mar. 18, 1938, by Herschbach Drilling Company. On Mar. 19th, 311' of 12-1/2" casing was set at 328' with 250 sacks of common El Toro cement and 25 sacks of special cement.

An air pocket was drilled into at 1720' and the drilling mud blew out of the hole, causing a loss of two hours, killing the well.

At total depth, 2915', 2895' of 8-5/8" casing was landed at 2911' on Mar. 30th and set with 850 sacks of common El Toro cement and 50 sacks of special cement.

On April 7th, the first core was started with a 4-3/4" core barrel at 3370'. At total depth, 3382', with open hole from 2911', an open flow test was made through the 8-5/8" casing with the drill pipe in the hole. The well was tested and found to be making 30,900,000 cu. ft. of sweet gas per day.

On Apr. 8th, the 4-3/4" hole was reamed to 7-7/8" size from 3370' to 3387'. A core was then taken from 3387' to 3402' and the hole was then reamed to 7-7/8" size and drilled to 3571'.

A core was then taken from 3571' to 3580' with a 4-3/4" barrel; the hole was reamed to 7-7/8" size and a 6-1/4" core barrel was used from 3580' to 3613'.

A Halliburton testing tool was run into the hole at total depth, 3613', with a packer set at 3402'. The packer rubber failed to hold and no test was made. Coring was then started with a 6-1/4" barrel and continued to 3638'.

On Apr. 15th, a Schlumberger electrical survey was made of the well to the total depth, 3638'. The resulting graph showed the first gas at 3056', second at 3095', third at 3295', fourth at 3469', with main gas pay at 3056'.

(cont'd)

Well History (cont'd)

WGCo. Watkins #1

On Apr. 16th, 3424' of 5-1/2" casing was run to 3440' and set with 25 sacks of special El Toro cement. On the 20th, the well was unloaded between the 8-5/8" and 5-1/2" casing. This gas was turned into the drill pipe and the well was unloaded and tested from 3440' to 3638'. The test showed 1,500,000 cu. ft. of sweet gas with a slight spray of oil. The well was then killed with oil and drilled to 3665'. The drill pipe was then removed and preparations were made for shooting the well with nitro-glycerine.

The well unloaded oil and, on running gauge, the well was found to be bridged at 3570'. E.L. Farmer was then called on Apr. 22, 1938, and his swabbing unit was used to bail the well until 8:00 A.M., Apr. 23rd.

On Apr. 23rd, the well was shot dry with 200 quarts of nitro-glycerine from 3540' to 3640', and the last two shells from 3640' to 3665' with cement to plug the bottom of the hole. Four Bakelite shells full of gravel were placed on top of the shot to bridge the well above the shot and protect the 5-1/2" casing. The shot went off at 12:20 P.M. and the hole bridged. Running the measuring line, the bridge was found to be at 859'. Otis was then called for snubbing equipment and control heads and drilling on the bridge commenced. Three feet were drilled and an impression block was run and showed the well to be all right so far. Four more feet were made and the well blew in. The pressure between the 8-5/8" and 5-1/2" dropped from 1300# to 500#, showing that the 5-1/2" casing had a hole in it. Another impression block was run on Apr. 28th and the casing was found to be flattened on one side. On Apr. 29th, a tubing head was put on and the well was ready for production.

The well started producing on May 2, 1938, and produced until May 16th. During that time, it made 41,647,000 cu. ft. of gas.

On May 16, 1938, Herschbach began to rig up and prepare to drill the bridge from the 5-1/2" casing. The well was killed on the 21st after pumping against it for two days. A reed swedge tool was put above the 4" bit and drill collar. The 5-1/2" casing was rolled out and the bridge was drilled through. The well was again killed and a second bridge was found to be at 3415'-53'. The hole was then circulated in preparation for a squeeze job on the split casing.

(cont'd)

Well History (cont'd p.3)

WCo. Matkins #1

On May 23, 1938, a Baker retainer plug was set at 3390' and 5-1/2" casing was plugged with 175 sacks of El Toro cement. The plug was drilled on the 26th at 785' and found about 400' of cement in the hole. The squeeze job was satisfactory. Cleaned out and found bridge at 3570', circulated hole and began testing.

On May 30th the hole was cleaned out to the bottom. Drill pipe was then removed and 2-1/2" tubing was run to 3630', and then the well cleaned itself behind the tubing. It would not flow through the tubing. On June 1st, the tubing was raised two joints to 3565' and the well cleaned itself through the tubing.

An open flow test through the tubing showed 7,500,000 cu. ft. of gas. After blowing open for two days, a test showed the well to be making 5,000,000 cu. ft. of gas with 1-1/4 barrels of oil per hour after shot.

Due to contract requirements the well was drilled deeper and no other producing zones were encountered. At total depth, 3853', the well flowed 216 barrels of fluid which was 90% salt water and 10% basic sediment and oil, and the hole was plugged back to 3642' with cement.

On production test, with open hole from 3440' to 3642', the well made only 500,000 cu. ft. of gas with no oil, so the casing was perforated with Lane-Wells gun perforator from 3275' to 3300' with 24 shots and there was no increase in the volume of gas.

The casing was then perforated with 24 shots from 3030' to 3150' and the well tested 14,000,000 cu. ft. of sweet gas.

This well was completed Dec. 23, 1938, with an initial open flow test of 14,000,000 cu. ft. of gas and 8 barrels of condensate per 24 hours, and was tied into El Paso Natural Gas Company's high pressure gathering system.

The gas being produced from this well is coming from the Yates sand zone from 3030' to 3150'.

SPECIAL TESTS MADE ON PRODUCTION

<u>Type and Depth</u>	<u>Results</u>
Open flow, 2911'-3382'	Tested through open 8-5/8" casing with drill pipe in hole. Made 30,900,000 cu. ft. of sweet gas.
Halliburton, 3402'-3613'	Packer failed to hold and no test was made.
Schlumberger, to TD 3638'	Gas: (1) 3056', (2) 3095', (3) 3295', (4) 3469'; main gas pay at 3056'.
Drill stem, 3440'-3638'	Before shot, made 1,500,000 cu. ft. of sweet gas with a light spray of oil.
Gas production	While on production 5/2 to 5/16/38, made 41,647,000 cu. ft. of gas.
Tubing test, after shot.	With 2-1/2" tubing at 3630' would not flow, but cleaned itself behind the tubing. The tubing was then raised to 3565' and then showed 7,500,000 cu. ft. of gas. After allowing well to flow for two days, it tested 5,000,000 cu. ft. of gas per day, and 1-1/4 barrels of oil per hour through open tubing.

CORE RECORD

3370'-80' - 10' recovery.
 3370'-2½' - Porous lime with show of oil and gas.
 3372½'-5' - Hard lime showing oil.
 3375'-82' - Hard lime.

 3382'-85' - 2' recovery.
 3382'-85' - Hard lime with slight show of oil. Cutter head locked.

 3385'-92' - 6' recovery.
 3385'-92' - Hard lime, no shows of any importance. Slight porosity in bottom 1 ft. of core.

 3392'-02' - 7' recovery.
 3398'-00' - Small porosity and slight show of oil. Core very broken. All recovery was limestone.

 3570'-80' - 8' recovery.
 3570'-73' - Hard lime.
 3573'-74' - Sandy shale.
 3574'-78' - Hard lime.
 3578'-79' - Sand with shale streaks.
 3579'-80' - Lime, no shows, very hard core.

 3580'-88' - 7½' recovery.
 3580'-82' - Lime.
 3582'-83' - Sand with shale streaks.
 3583'-85' - Hard lime.
 3585'-87' - Hard lime with small porosity and slight show of oil.

 3588'-98' - 5½' recovery.
 3588'-89' - Limestone.
 3589'-90' - Shale.
 3590'-91' - Sand with shale streaks and show of oil and gas.
 3591'-92' - Sand with show of gas and oil.

 3598'-04' - 6' recovery.
 3598'-00' - Sand with smell of oil and gas.
 3600'-01' - Sandy shale.
 3601'-04' - Hard lime with shale streaks.

 3604'-13' - 7½' recovery.
 3604'-08' - Hard lime.
 3608'-10' - Sandy lime with shale streaks.
 3610'-11' - Hard lime.

(Cont'd.)

Core Record (Cont'd.)

3613'-19'	-	1' recovery.
3613'-19'	-	Lime.
3619'-28'	-	9' recovery.
3619'-21'	-	Sandy shale.
3621'-4 1/2'	-	Hard lime with shale streaks.
3624 1/2'-8'	-	Hard lime with small porosity and bleeding core.
3628'-38'	-	10' recovery.
3628'-29'	-	Lime with shale streaks.
3629'-32'	-	Sand with good show of oil.
3632'-38'	-	Lime with shale streaks.
3638'-58'	-	14' recovery.
3638'-47'	-	Lime with shale streaks.
3647'-48'	-	Sand with odor.
3648'-50'	-	Lime with shale streaks.
3650'-51'	-	Sand with odor, probably water.

Casing Record:

(Total depth 3853'; Plug back 3644'.)

<u>Size</u>	<u>Amount</u>	<u>Depth</u>	<u>Sacks</u> <u>Cement</u>
12-1/2"	311	329'	275
8-5/8"	2895	2911'	900
5-1/2"	3424	3440'	100
2-1/2"	3618	3630' 6"	12' off bottom

Perforated bottom 10' of bottom joint.

Geological Points:

Elevation of derrick floor	3384'
Top anhydrite by drilling time	1330'
Top salt	1330'
Base salt	2860'
Top brown lime	2910'
Top Yates sand	3005'

Matkins #1

WESTERN GAS CO.
#1 MATKINS
SE 32 - 15-23-36
ET. 3500

CORE 9870

SPUR - 3-18-38
COMP - 3-1-38

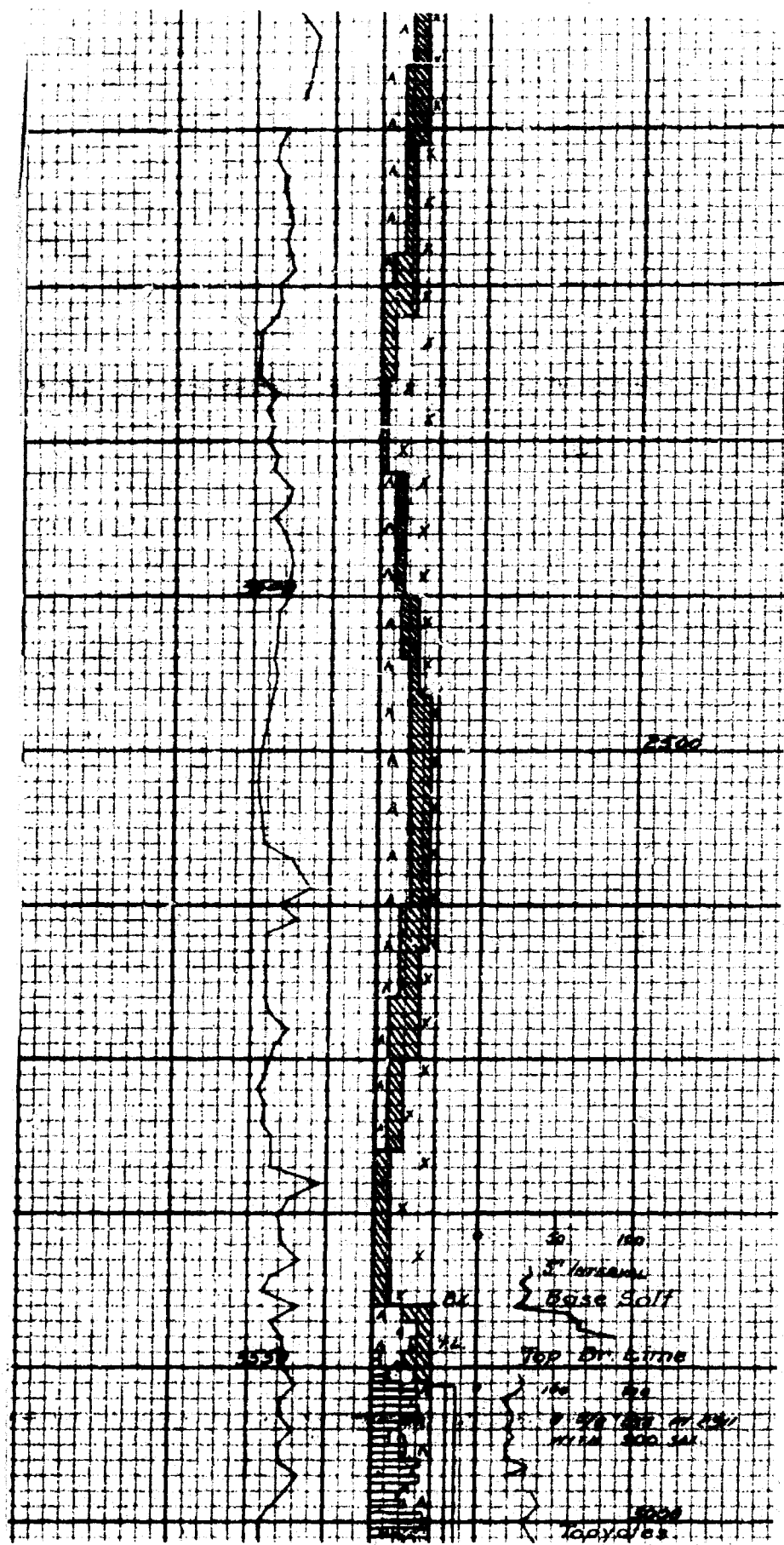
450 FOOT
INTERVAL

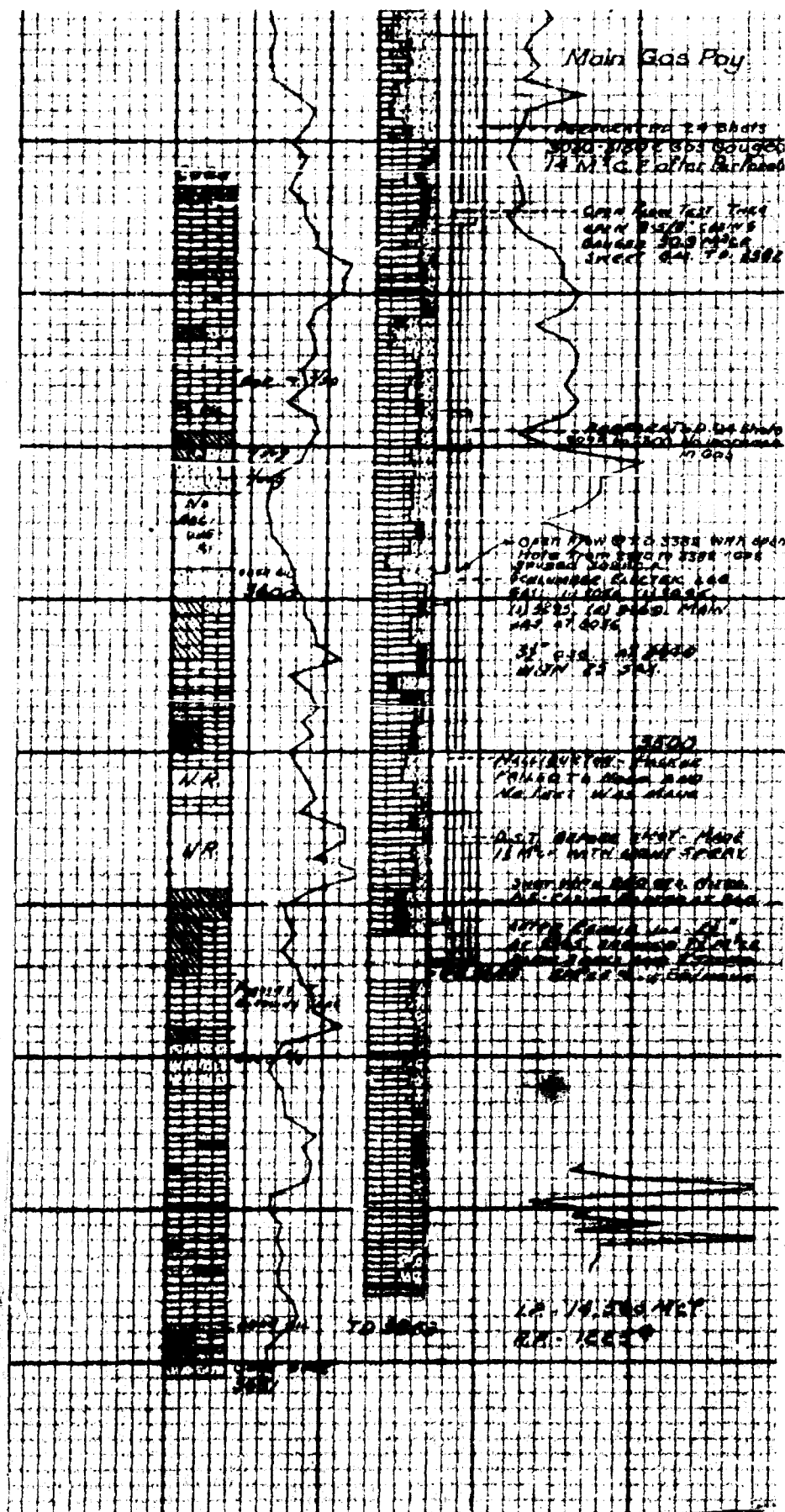
DRILL TIME
PER 10'

DELETED

127' LOG AT 38
WITH 275' LOG

SHALE
SANDSTONE
SAND
LIME





REPORT

prepared by

CULBERTSON & IRWIN, INC.

Copy

CULBERTSON & IRWIN, INC.

Culbertson & Irwin, Inc. & R. K. Stovall, #1 Stuart,
SW/4 SE/4 Section 10, T-25-S, R-37-E.

Culbertson & Irwin, Inc. & R. K. Stovall, #2 Stuart,
SE/4 SE/4 Section 10, T-25-S, R-37-E.

R E P O R T

We submit the following evidence and history of these wells to show that there is no actual waste being committed by the present method of producing these wells.

Culbertson & Irwin, Inc., & R. K. Stovall #1 Stuart is located in the eastern portion of what is now designated as the Langlie Pool. This well was the discovery producer of the portion of the pool and was spudded February 12, 1936, and completed May 2, 1936. The well was drilled with Cable tools, 12-1/2" casing was set at 114', 10" casing at 603' and 8" casing at 1305'. The well was then drilled open until a depth of 3295' was reached. The test blew out at this depth, a string of tools were lost in the hole and never recovered. It required some three days to bring the well under control and kill the oil and gas flow with mud and water. After the well was killed, 7" casing was set at 3060' and cemented with 300 sacks of cement. The hole was then unloaded and allowed to clean up and on an open flow into the pits was estimated making 6000 barrels of oil daily with 25,000,000 cubic feet of gas. Tubing was run and set at 3204' and a test made through a 3/4" choke on a two hour test, the well made 139 barrels of oil with the casing pressure remaining at 1050 pounds, and tubing pressure at 750 pounds.

Subsequent drilling in this area shows that the producing sand in this well is a lenticular sand which grades out to the west and thins up structure to the east. It is our belief that this is the only well producing oil from this particular sand horizon in this area, although the gas-oil ratio is fairly high on this well we feel that the withdrawal of the gas necessary to produce the top allowable from the well is not injurious to the regular

#1 Stuart
#2 Stuart

zone on the extreme eastern side of the pool and the zone of production from the sand is approximately two locations wide and strikes NW-SE, parallel to the strike of the structure. That it is a higher pressure sand than the regular producing sand in the Langlie pool and that it is necessary to produce a large volume of gas in order to obtain the daily allowable oil production from wells in this sand, and that the withdrawal of gas from this sand does not deplete the pressure in the main producing horizon in the Langlie pool and that wells producing from this sand should be exempt from any gas-oil ratio order which may be applied to the Langlie pool.

CULBERTSON & IRWIN, INC.

#2 W. H. Martin, located 990' from N line and
330' from E. line, Section 31, Twp. 24-S,
Rge. 37-E, Lea Cty, New Mex.

This well was commenced on August 11, 1939, and completed October 21, 1939. The 10-inch surface pipe was set at 394' and cemented with 150 sacks of cement, and the 7-inch oil string cemented with 250 sacks at 3385'. The plug was drilled and well drilled to 3414', at which depth the well blew out and gas gauged at 36-million cubic feet per day. The well was then killed with mud and drilled 3447', at which depth a 5-inch liner was run and cemented. The entire 36-million feet of gas was shut off with the liner and the hole was then drilled to 3545', at which depth it tested 121 barrels of oil in 24 hours, natural. The well was then shot with 120 quarts of solidified nitro from 3545' to 3467', and after cleaning out tested 192 barrels of oil in 24 hours.

It is our opinion that the oil and gas in this well are coming from the same sand horizon and since the entire section has been shot within 25' of the bottom of the liner, we feel that it is impossible to do any type of remedial work to successfully reduce the gas-oil ratio.

We also have a market for the gas from this well and, inasmuch as we are not blowing any excess gas into the air, we do not feel that there is any actual waste. This well is flowing against a separator pressure in excess of 500# and the gas taken directly into the El Paso Natural Gas Company's high pressure gas line.

CULBERTSON & IRWIN, INC.

WWI/ile

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CITIES SERVICE OIL COMPANY

Geological Dept.

Hobbs, New Mex.

August 3, 1940

Mr. W. K. Davis,
El Paso Natural Gas Co.,
Jal, New Mexico

Dear Mr. Davis:

Enclosed herewith are copies of well history on Cities Service Dabbs #1, Section 23-25S-37E, and Cities Service Lindley "B" #2, Section 13-25S-36E, Lea County.

It is believed, after considering the use that you wished to put this information to, that a more concise resume might be of more benefit than to go into too much detail which might be confusing, hence we have summarized considerable detail in trying to give only pertinent data which the commission could consider with the least trouble.

After checking my log strips it is not believed that they would photostat to any advantage and if new ones were to be made it would take more time and should be gone into in more detail should conditions warrant a hearing.

Trusting that the enclosed will be what you needed, I am

DRG/JB

Yours very truly,

(SIGNED--DELMAR R. GUINN)

Delmar R. Guinn,
District Geologist,
New Mexico District.

Encl-

REPORT

prepared by

CITIES SERVICE OIL COMPANY

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WELL HISTORY OF CITIES SERVICE

DABBS #1

Cities Service Oil Company Dabbs #1, C NWNW Section 23-258-37E, Langlie Area, Lea County, New Mexico, was completed 11/28/36 at a total depth of 3361 feet as a gas well with a volume of 37 million cubic feet per day. The 7 inch casing was set and cemented at a depth of 2450 feet. After setting casing the well was drilled with oil as the circulating fluid to a depth of 3216 feet where it became necessary to use mud to hold down the large volume of gas. The well was tested at various depths between 3121 and 3216 feet and the gas gradually increased until the volume gauged 37 million cubic feet per day at 3216. The well was cored from 3216 to 3361 and the cores were predominately a dense dolomite and tight sandstone with some dark shale streaks, indicating a section too tight to produce. The well was again opened up and tested at the total depth, showing the same amount of gas as when tested at a depth of 3216 feet and no oil.

Results of testing this well and information gained on offsets leads to the belief that it is quite probable that the gas sand above 3216 in this well is a lens and therefore is not definitely connected with oil producing zones at lower depths. Offsets to this well which are producing oil, have the casing set below the sand producing gas in this well and therefore are producing from a definitely lower sand zone than this well. Moreover, should it be considered possible that this sand is a continuous bed and producing oil lower structurally, it would seem that there would be no possibility of obtaining oil in this bed so high on the structure. By being forced to shut in such a well when a market for gas is available would tend toward premature abandonment of wells without allowing the operator a fair return on the investment and a loss to the state and individuals by not being allowed to recover royalties justly due them from resources located under their lands.

In view of the above facts it is believed that this well should be excepted from Section 22 of the Permanent Gas-oil ratio order recommended to the New Mexico Conservation Commission by the Lea County New Mexico operators. It is believed that this well should be governed by Section 21 which provides for reservoirs which are predominately gas bearing.

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TWO STATES OIL COMPANY

Dallas, Tex.

August 5, 1940

Mr. W. K. Davis
El Paso Natural Gas Company
10th Floor Bassett Tower
El Paso, Texas

Dear Mr. Davis:

With reference to the permanent gas-oil ratio order, to be issued in lieu of order No. 250, we call to your attention the damage which may result by the reduction of allowable on our Calley No. 1 well, located in the SE/4 SW/4 of Section 20-24S-37E, Lea County, New Mexico.

As you know, we are very anxious to sell you as much gas as possible from this well, as the gas sales constitute a most important part of the income from this well. For the well to continue being operated, we are dependent on this sale of gas and, as a consequence, we are disturbed over the possibility of the permanent order. We feel that if the facts of the wells in the area are recognized that the Commission will grant the necessary relief from the stringent provisions of the law, within the order itself. For this reason, we are making a part of this letter a completion report on our well, so that you may readily recognize that there is no physical remedy for the high ratio involved. We should like to join with other operators in the area in presenting our problem to the Commission and respectfully request that exception to the order be written in the order. Inasmuch as you are more effected than we are by this order, we are joining you in your petition to the Commission.

Very truly yours,

TWO STATES OIL COMPANY

By: (SIGNED: W. K. POWELL)

WKP:S
Encl.

REPORT

prepared by

TWO STATES OIL COMPANY

Copy

R E P O R T

TWO STATES OIL COMPANY,
SOUTHERN PETROLEUM EXPLORATION, ET AL,

L. J. Calley No. 1-A.

Location: 660 feet from the South line and 2310 feet from the West line of Section 20, Township 24 South, Range 37 East, Mattix Field, Lea County, New Mexico.

Elevations: 3283' derrick floor.

Contractors: Two States Drilling Company - Rotary Tools.

Spudded: August 10, 1939.

Completed as a producer: September 8, 1939.

Pipe: 8 5/8" 38' - with 150 sacks of cement.
5 1/2" 17# 3360' - with 200 sacks of cement.
2" upset tubing 3635'.

Packers: Guiberson spiral packer 4-3/4" set at 3496' on tubing.

Total Depth: 3635'.

Oil Pay: 3495-3515'; 3540-3565'; 3574-3578'; 3580-3635'.

Gas: Main gas 3375' to 3390'; more gas 3495-3515'.

Acid Record: At total depth of 3590' treated with 2000 gallons acid with 2 pumps attempting to hold acid below 3500'.

Shot Records: 160 quarts nitro-glycerin 3533-3615', American Glycerin Company, 20' of anchor.

Initial Production: 1 barrel of oil per hour - 1,150,000 cubic feet of gas.

Completion History: The well was first drilled to total depth of 3590' September 3, 1939. The well tested natural 1 barrel of oil per hour, with 375,000 cubic feet of gas. On September 4th it was treated with 2000 gallons of acid and tested 2-1/2 barrels of oil per hour, with 700,000 cubic feet of gas. On September 6th

it tested 1 barrel of oil per hour, with 800,000 cubic feet of gas. On September 7th it was drilled deeper to 3635'. On September 8th it was swabbed through tubing with packer set at 3505', swabbing 3-1/2 barrels of oil per hour but would not flow. On September 9th the packer was lifted and the well flowed 35 barrels of oil per hour, with 1,000,000 cubic feet of gas, but eventually made nearly all gas with 1 barrel of oil per hour. September 11th the well was killed with mud and shot with 160 quarts of nitro-glycerin 3533-3615', with 20' of anchor. Tubing was re-run with no packer and well tested 1 barrel of oil per hour, with 1,100,000 cubic feet of gas. Tubing with packer at 3740' was later run but packer did not hold and well tested 1 barrel of oil per hour, with 1,150,000 cubic feet of gas and completed as such.

Subsequent History: Connection was made with the Texas-New Mexico Pipe Line Company pipe line, and eventually a contract was made with the El Paso Natural Gas Company for gas purchase. The El Paso Natural Gas Company installed a high pressure separator and the well has subsequently tested 7,000,000 cubic feet of gas per day, with 16 barrels of oil. El Paso is taking an average of 1,000,000 cubic feet of gas per day.

The following is the drilling time from 3000 feet to total depth:

<u>FEET</u>	<u>MINUTES</u>	<u>FEET</u>	<u>MINUTES</u>
3000-02	35	3032-34	5
04	36	36	11
06	38	38	28
08	35	40	35
10	37	42	12
12	36	44	18
14	9	46	20
16	4	48	15
18	7	50	6
20	40	52	3
22	39	54	3
24	25	56	2
26	30	58	3
28	18	60	2
30	21	62	3
32	9	64	3

<u>FEET</u>	<u>MINUTES</u>
3064-66	4
68	5
70	13
72	35
74	22
76	6
78	24
80	35
82	35
84	41
86	54
88	45
90	53
92	42
94	26
96	44
98	65
3100	55
02	26
04	31
06	35
08	23
10	20
12	20
14	22
16	12
18	9
20	3
22	6
24	11
26	21
28	5
30	7
32	6
34	2
36	3
38	10
40	15
42	52
44	47
46	51
48	16
50	14
52	9
54	10
56	10

<u>FEET</u>	<u>MINUTES</u>
3156-58	9
60	38
62	38
64	26
66	18
68	28
70	26
72	31
74	35
76	51
78	79
80	65
82	65
84	30
86	48
88	32
90	33
92	43
94	31
96	28
98	36
3200	48
02	50
04	50
06	25
08	25
10	41
12	19
14	11
16	20
18	30
20	69
22	90
24	45
26	32
28	42
30	52
32	42
34	30
36	60
38	29
40	44
42	43
44	33
46	31
48	33

FEET	MINUTES
3248-50	26
52	30
54	25
56	18
58	32
60	33
62	40
64	33
66	43
68	62
70	47
72	42
74	40
76	58
78	45
80	47
82	47
84	64
86	49
88	46
90	57
92	40
94	39
96	45
98	33
3300	32
02	42
04	43
06	45
08	31
10	31
12	28
14	27
16	38
18	23
20	21
22	21
24	21
26	35
28	26
30	23
32	33
34	40
36	39
38	28
40	41
42	75
44	39
46	61
48	58
50	49

FEET	MINUTES
3350-52	40
54	38
56	46
58	54
60	46
3361-62	11
64	19
66	16
68	14
70	20
72	19
74	24
76	23
78	19
80	18
82	17
84	10
86	13
88	11
90	20
92	35
94	51
96	25
98	44
3400	50
02	86
04	124
06	78
08	81
10	39
12	24
14	19
16	51
18	64
20	65
22	59
24	22
26	17
28	23
30	80
32	32
34	33
36	33
38	21
40	43
42	21
44	32
46	38
48	37
50	34
52	28

<u>FEET</u>	<u>MINUTES</u>
3452-54	10
56	31
58	41
60	48
62	48
64	38
66	74
68	124
70	80
72	89
74	54
76	35
78	13
80	6
82	11
84	60
86	71
88	41
90	36
92	91
94	77
96	20
98	16
3500	45
02	48
04	46
06	55
08	48
10	45
12	22
14	8
16	10
18	28
20	65
22	57
24	51
26	33
28	71
30	74
32	20
34	31
36	37
38	32
40	24
42	49
44	32

<u>FEET</u>	<u>MINUTES</u>
3544-46	30
48	33
50	39
52	40
54	32
56	51
58	51
60	45
62	40
64	13
66	54
68	44
70	38
72	45
74	47
76	11
78	29
80	60
82	42
84	18
86	40
88	47
90	47 TD 9/3/39
92	19
94	20
96	18
98	17
3600	22
02	19
04	44
06	42
08	24
10	32
12	38
14	42
16	45
18	26
20	47
22	42
24	42
26	53
28	52
30	25
32	59
34	28
35	15 TD

The following is the driller's log:

0 -	35	Caliche
	135	Sand and shells
	1165	Red beds and red rock - medium
	1265	Anhydrite - hard
	2715	Broken anhydrite and salt
	2775	Solid anhydrite - hard
	2830	Anhydrite and brown lime
	2920	Lime
	3014	Lime, anhydrite and shale
	3070	Lime and sand - Gas 3014-16 and 3050-70
	3090	Lime
	3164	Lime and anhydrite
	3635	Lime - TD

The following are formation tops picked from the samples:

Top Anhydrite:	1160
Top Salt:	1261
Base Salt:	2715
Top Br. Limes:	2740
Top of Pay:	3495

Respectfully submitted,

(SIGNED: H. B. HEADLEY)

Case No.

21

Application, Transcript,
Small Exhibits, Etc.

**EAS-OIL RATIO HEARING FOR
ADOPTION OF FINAL ORDER
JULY 29-1940**

"Tuftear"

FILING FOLDERS

TO DUPLICATE THIS FOLDER ORDER

Globe-Wernicke

NO. 632

MADE IN U. S. A.

LEA COUNTY OPERATORS COMMITTEE

FORT WORTH, TEXAS

July 11, 1940.

Honorable John E. Miles, Governor,
Chairman, New Mexico Oil Conservation Commission,
Santa Fe, New Mexico

Dear Sir:

As Chairman of the Lea County Operators Committee, I am hereby respectfully requesting that the Oil Conservation Commission of the State of New Mexico call a hearing at Santa Fe, New Mexico, on the 29th day of July, 1940 or at any other proximate date which might be more convenient to your honorable body, for the purpose of hearing evidence for the promulgation of a final order governing gas/oil ratios for the various fields of the State of New Mexico in lieu of gas/oil ratio order #250.

For your information, I am attaching copy of recommendations the Lea County Operators have adopted and which will be presented to the Oil Conservation Commission at this hearing for consideration in adopting a permanent gas/oil ratio order for the various fields in Lea County, New Mexico.

Yours very truly,


CHAIRMAN.

MEM:JU

cc: Honorable Frank Worden
State Land Commissioner and Conservation Commissioner

Honorable A. Andreas,
State Geologist and Conservation Commissioner

Honorable Carl B. Livingston,
Attorney for Oil Conservation Commission.

The New Mexico (Lea County) operators respectfully recommend to the New Mexico Conservation Commission the adoption of a permanent gas/oil ratio order which will incorporate in its provisions the following points or ideas:

All operating gas/oil ratio tests shall be taken by or under the supervision of the State Oil Conservation Commission.

1. Operator

The operator shall: (1) in accordance with existing rules and regulations of the Conservation Commission, equip each well to make conveniently a gas/oil ratio test, and shall equip same in accordance with an approved hookup; (2) furnish the Deputy of the Commission a complete list of his wells showing the type of metering equipment best adaptable for accurate gas measurement in accordance with rules contained herein. Such information shall include the size of vent line, size of orifice flange or connection available, and if possible, the desirable size of orifice in the orifice plate; (3) furnish sufficient and qualified lease labor to install and manipulate all lease equipment, including the installation and/or changing orifice, raising or lowering vent lines, etc., in preparation for and during gas/oil ratio tests conducted in accordance with this order.

2. Oil Conservation Commission

The Oil Conservation Commission shall: (1) Assemble the information supplied by the operators as recommended above, and arrange test schedule; (2) Assign engineers to supervise tests. Only in the event of an emergency shall company engineers be used as witnesses and they shall not be permitted to witness tests on their employer's property; (3) instruct all personnel in the proper operation of measuring equipment and procedure

in conducting the tests; (4) calibrate all measuring equipment; (5) Furnish, calculate, record and file all gas measurement charts and records; (6) compute all gas/oil ratios; (7) determine whether the test was properly conducted and if necessary schedule retests; (8) refuse to test wells not properly equipped in accordance with approved hookup.

3. Witness

The witness shall supervise: (1) the installation of the gas measuring equipment; (2) the proper operation of the equipment ; (3) the proper gauging of the lease tanks to accurately determine the production of oil and water; (4) the proper recording of the pertinent data required; (5) the placing of seals ^{on} locking devices; (6) the witness shall take such other action as may be necessary to accomplish the desired purpose.

4. Manner of Testing

- a. For the purpose of stabilization, each well shall be produced for a period of 24 hours at a rate as nearly as possible to the normal manner of operation but not less than the daily allowable the well would have without gas/oil ration adjustment
- b. Tanks shall be gauged by the witness at the beginning and end of this stabilization period.
- c. No change shall be made which affects the rate of production during the last 12 hours of the stabilization period and during the entire test period.
- d. The test period shall consist of 24 hours. Oil and gas shall be gauged for the full period.
- e. In case of a stop-cocked well, the oil and gas shall be measured for the time it is produced.

- f. If for any reason gas should be withdrawn from the casing, this volume of gas shall be added to that produced through tubing in computing the gas/oil ratio and such gas shall be measured for the full 48 hours of stabilization and test periods, and the largest volume whether the first or second 24 hour period, shall be used in computing the gas/oil ratio.
- g. For gas-lift or jetted wells, the total volume of gas to be used in computing the operating gas/oil ratio is the total output volume minus the total input volume. The total input volume must be metered.

5. Liquid Measurements

- a. All tanks shall be gauged to the nearest 1/8 inch. Care should be exercised to keep the gauge line taut and in case there are ripples or foam on the oil surface the tank should be allowed to stand until the fluid reaches equilibrium and the foam can be brushed aside.
- b. Tanks shall be thieved immediately before and after the test and water percentage determined in accordance with A.P.I. specifications.
- c. The total volume of liquid produced shall be calculated in accordance with the latest strapping tables of the tanks.
- d. The net volume of oil shall be the total volume of fluid less the volume of B.S. and W. as determined by Paragraph "b" above.
- e. Fluid level in the separator must be maintained relatively constant such that the oil dump valve is covered at all times by at least 12 inches of liquid.
- f. If it is necessary to use a flow tank for the separation of water the water-oil level must be the same at the beginning and end of test.

g. All liquid measurements shall be in barrels of 42 gallons and shall be carried to the second decimal.

8. Gas Measurement

- a. A calibrated pressure gauge shall be installed on each separator and readings taken periodically. In the event the operator chooses to conduct the test at a separator pressure in excess of 100#, a recording pressure gauge will be installed on the separator and the measured gas/oil ratio shall be increased by the measured or calculated volume of gas going to the tanks. Calculated volume shall be based on the gas-solubility vs. pressure curves for the field or area in which the well is located.
- b. For computing the volume of all gas produced the standard of pressure shall be 10 oz. above an atmospheric pressure of 14.4 lbs. per sq. in. the standard temperature shall be 60° F. and the standard of specific gravity shall be 0.85 as compared to air. All measurements of gas shall be adjusted by computation to these standards. In case the gas measurement is made at a pressure in excess of 100#, the measurement shall be adjusted in accordance to deviation from Boyles Law. Gas volumes will be computed in cubic feet and gas/oil ratios in cubic feet per barrel of oil.
- c. Only 24 hour recording type gas measuring devices shall be used.
- d. Orifice well testers, orifice meters and side pressure test nipples are approved. Side pressure nipples shall be used only when it is necessary to measure volumes larger than can conveniently be measured by orifice meter. A standard set of tables for each device will be on file in the office of the Deputy of the Commission.

7. Any well that cannot be tested, under the preceding rules shall be referred to the Oil Conservation for special consideration and rules.
8. The gas/oil ratio of a unit, regardless of the number of wells thereon, as applied in this order, shall be the total output gas less the total input gas divided by the barrels of oil produced.
9. (a) A marginal unit is one which did not produce the acreage allowable for the pool in which the well is located during the standard gas/oil ratio test.
(b) The ability of a marginal unit to produce as determined by its standard gas/oil ratio test shall be taken as the normal allowable of such a unit.
10. The normal oil allowable of a non-marginal unit is the allowable it will receive before the gas/oil ratio adjustment is applied.
11. A standard gas/oil ratio test shall be made on each well or unit in accordance with the rules as provided herein once each year. The tests shall be made not more than 30 days prior to the effective date of the gas/oil ratio survey for the pool in which the well or unit is located, as shown in Exhibit A attached.
12. A standard gas/oil ratio test shall be made within 30 days after the completion of a new well, remedial work, work-over, clean-out, acidization or any changes which affect subsurface producing conditions. The effective date of such tests shall be the beginning of the next succeeding monthly proration period except that the Commission must be notified that the well or unit is ready for test at least five days before the beginning of such proration period. Tests shall not be required due to changes in choke opening or in subsurface pumping equipment unless requested by the owner or operator of the well or unit. All wells included in this section shall be re-tested on the next regular survey either annual or semi-annual.

13. A standard gas/oil ratio test shall be made at the discretion of the Commission or its duly authorized deputy on any well or unit whenever a written request is submitted to the Commission or its duly authorized deputy by any operator in the pool in which the well or unit is located. Also, tests may be made on any wells selected by the Commission or its deputy for any reason whatsoever. The effective date of such tests shall be the same as provided in paragraph 12 above.
14. A standard gas/oil ratio test shall be made semi-annually on all wells tested in accordance with paragraphs 11 and 13 above, which wells on the preceding test, had a gas/oil ratio in excess of 80% of the maximum provided for the pool in which the well is located. The tests shall be made not more than 60 days prior to the effective date for the pool in which the well or unit is located as shown in Exhibit A attached.
15. Wells which have not had a standard gas/oil ratio test made at the effective date for the pool in which the well is located shall receive no oil allowable until the succeeding monthly proration period after a test has been made.
16. The oil allowable of each well or unit producing with a gas/oil ratio in excess of the maximum provided for the pool in which the well or unit is located shall be adjusted as hereinafter provided. The maximum gas/oil ratio permitted each pool and undesignated area is shown in Exhibit A attached.
17. The application of the gas/oil ratio adjustment shall be as follows:
- a. The oil allocation shall be distributed to the various pools in the same manner used prior to February 1, 1940.

✓ b. In each pool, except Hobbs and Monument, the total amount of oil allocated to marginal units not ^{✓P}subject to the gas/oil ratio adjustment shall first be subtracted from the pool total oil allocation. Each remaining unit shall be given a percentage rating the value of such rating depending upon its gas/oil ratio. Each unit having a gas/oil ratio equal to or less than the maximum permitted that pool shall be rated at 100. The rating of units having a gas/oil ratio in excess of the permitted maximum shall be calculated according to the following fraction:

$$\text{Rating} = \frac{\text{Pool maximum gas/oil ratio} \times 100}{\text{Unit gas/oil ratio}}$$

> The remaining oil shall be distributed to each remaining unit in the ratio that the rating of each unit bears to the sum of all ratings in the pool.

c. In the Hobbs and Monument Pools the proration schedule shall be calculated in the normal manner according to the order of the Commission for that Field. Each unit having an allowable equal to or less than the average unit allowable for the pool shall be allowed to produce an amount of gas equal to the product of the permitted maximum gas/oil ratio of the pool multiplied by the average unit allowable;

provided that a unit, the oil allowable of which has been adjusted by high gas/oil ratio shall not exceed its normal allowable.

Any unit having an allowable greater than the average unit allowable for that field shall be allowed to produce only that amount of gas determined by the product of the permitted maximum gas/oil ratio and its normal oil

allowable. From the pool allocation shall be deducted the amount of oil allocated to marginal wells and wells adjusted for high gas/oil ratio. The remaining oil shall be distributed to the remaining unadjusted wells in accordance with the pool proration plan.

18. Legal overage and shortage shall be handled as in the past. That is, the adjusted oil allowable shall be the current oil allowable plus approved shortage or the current allowable less the overage, whichever applies in the particular case.
19. In order to encourage repressuring or the maintenance of reservoir pressure, the volume of gas injected into the reservoir may be deducted from the output gas in determining the net gas/oil ratio. The exact manner of applying this section shall be determined after a public hearing before the Commission.
20. When remedial work has been completed on a unit an adjusted allowable will be granted from the date of starting such work, for a period not exceeding 60 days; calculated on the basis of the standard gas/oil ratio test made subsequent to remedial work.
21. Units producing from a reservoir designated by the Commission as predominantly gas-bearing shall be exempt from gas/oil ratio adjustments. Provided, however, that no unit producing from such a reservoir shall be allowed to produce more oil than the average top allowable of a unit for the county in which it is located.
22. Units producing gas only from a reservoir not designated as a gas reservoir, as provided in Section 21 above, shall be allowed to produce only as much gas as would result in a reservoir voidage on a volumetric basis equal to that voided by an oil well producing with a maximum gas/oil ratio permitted for that reservoir.

23. Marginal units produced primarily for gas sale in a reservoir, as described in Section 22 above, shall be permitted to produce a volume not to exceed that permitted in Section 22 above.
24. Wells in newly discovered or undesignated pools shall be allowed to produce with a limiting gas/oil ratio of 2,000 cubic feet per barrel for purposes of allocation until a hearing shall have been called and testimony presented upon which a ratio can be set. Such hearing shall be called and rules issued within six months after the completion of the discovery well or upon the completion of ten producing wells in the new pool, whichever occurs first.
25. For purposes of oil allowable adjustment, only those gas/oil ratios taken under the supervision of the Conservation Commission and by its duly accredited deputy shall be used. Insofar as the proration of oil is concerned, gas/oil ratios reported monthly on Form C-104A shall not be used.
26. Exemptions shall be granted only after duly advertised public hearing.
27. In any case where it appears that serious inequities to property rights, or irreparable damage to a well or wells may be caused by the application of the gas/oil ratio adjustments above defined, the Commission shall postpone application of such penalties upon proper application for a hearing from the party or parties who may be injured, until such time as a hearing has been held and a decision reached. The decision of the Commission as a result of such hearing shall be retroactive to the date at which the gas/oil ratio adjustment became effective as to other wells in the field.

EXHIBIT A

EFFECTIVE DATE OF GAS/OIL RATIO SURVEYS

FIELD	TOTAL WELLS	COMM. MAX. G/O RATIO	EFFECTIVE DATE	
			ANNUAL SURVEY	SEMI-ANNUAL SURVEY
Arrowhead	73	5,000	March 1	September 1
Cooper	90	10,000	April 1	October 1
✓ Corbin	1		March 1	September 1
Eaves	19	7,000	April 1	October 1
Eunice	491	7,000	June 1	December 1
Halfway (nmw 2000)	4		March 1	September 1
Hardy (nmw 5,000)	117	7,000	October 1	April 1
Hobbs	251	4,000	October 1	April 1
Jal	19	10,000	March 1	September 1
Langlie	126	7,000	December 1	June 1
Lynch (nmw 2000)	10		March 1	September 1
N. Lynch (nmw 2000)	2		March 1	September 1
Lynn	25	5,000	March 1	September 1
Mattix	143	7,000	December 1	June 1
Monument	493	6,000	August 1	February 1
North Penrose 0 (nmw 7,000)			January 1	July 1
(177)		7,000		
South Penrose 0 (nmw 7,000)			January 1	July 1
Rhodes (nmw 2000)	6	5,000	April 1	October 1
Skaggs	3	5,000	March 1	September 1
Skelly	68	7,000	January 1	July 1
South Eunice	65	7,000	March 1	September 1
West Eunice	6		March 1	September 1
South Lovington	34	2,000	July 1	January 1
Vacuum		2,000	July 1	January 1

LEA COUNTY OPERATORS COMMITTEE

MINUTES OF A MEETING OF
LEA COUNTY OPERATORS COMMITTEE
HELD AT
FORT WORTH, TEXAS
JULY 10, 1940

In accordance with notice addressed to all Lea County Operators June 26, 1940, together with a copy of gas-oil ratio recommendations made by the Engineers Advisory Committee and Sub-Advisory Committee at their meetings held at Midland, Texas, June 19 and 20, 1940, a meeting of the Lea County Operators Committee was convened by A.M. McCorkle, Chairman, in the Worth Hotel, at Fort Worth, Texas, 9:30 A.M. July 10, 1940.

The following persons were present:

R.S. Christie	Amerada Petroleum Corp.	Ft. Worth, Texas
C.V. Millikan	Amerada Petroleum Corp.	Tulsa, Oklahoma
W.W. Scott	Atlantic Rfg. Co.	Dallas, Texas
J.S. Noland	Barnsdall Oil Company	Tulsa, Oklahoma
R.G. Gough	Continental Oil Co.	Ft. Worth, Texas
H.L. Johnston	Continental Oil Co.	Hobbs, New Mexico
J.P. Cusack	J.P. Cusack, Inc.	Midland, Texas
E.S. Calvert	Devonian Oil Company	Tulsa, Oklahoma
D.A. Powell	Drilling & Exploration Co., Inc.	Hobbs, New Mexico
Lloyd L. Gray	Gulf Oil Corporation	Tulsa, Oklahoma
Geo. P. Livermore	Great Western Prod. Inc.	Odessa, Texas
S.G. Sanderson	Gulf Oil Corporation	Tulsa, Oklahoma
R.S. Dewey	Humble Oil & Refining Co.	Midland, Texas
J.N. House	Humble Oil & Refining Co.	Midland, Texas
Ed Downing	Magnolia Petroleum Company	Kermit, Texas
S.P. Mannifin	Magnolia Petroleum Company	Roswell, New Mexico
J.B. Wheeler	Ohio Oil Company	Houston, Texas
Glenn Bish	Ohio Oil Company	Houston, Texas
B.D. Baker	Parker Drilling Company	Ft. Worth, Texas
Neville G. Penrose	Neville G. Penrose, Inc.	Ft. Worth, Texas
D.R. McKelthen	Phillips Petroleum Company	Bartlesville, Okla.
Paul N. Colliston	Phillips Petroleum Company	Midland, Texas
Paul A. McDermott	Repollo Oil Company	Ft. Worth, Texas
F.W. Brigance	Rowan Drilling Co.	Ft. Worth, Texas
O.D. Crites	Shell Oil Company, Inc.	Houston, Texas
R.G. Schuohlo	Shell Oil Company, Inc.	Midland, Texas
H.J. Kemler	Shell Oil Company, Inc.	Midland, Texas
K. Albertson	Shell Oil Company, Inc.	Houston, Texas
George W. Solinger	Skelly Oil Co.	Tulsa, Oklahoma
J.N. Dunlavoy	Skelly Oil Co.	Hobbs, New Mexico
G.H. Card	Stanolind Oil & Gas Company	Ft. Worth, Texas
F.E. Hoath	Sun Oil Company	Dallas, Texas
C.E. Yager	Texas Pacific Coal & Oil Co.	Ft. Worth, Texas

The proposed recommendations for the promulgation of a final order governing gas-oil ratios for the various fields in Lea County, New Mexico, in lieu of Gas-Oil Ratio Order #250, were discussed at length and, with a few more or less minor changes, were unanimously adopted and the Chairman was instructed to request the New Mexico Oil Conservation Commission to call a hearing at Santa Fe, New Mexico on the 29th day of July, 1940, or at any other proximate date which might be more convenient to them, at which time the above referred to recommendations would be presented to the Commission for consideration in adopting a permanent gas-oil ratio order.

A copy of the revised recommendations is attached hereto.

On motion duly made and seconded, Harry Leonard was unanimously elected a member of the Executive Committee to fill vacancy caused by resignation of B.A. Bowers.

The chairman informed the meeting that the plans for the new office building for the Umpire at Hobbs, New Mexico, had been revised and re-submitted to various contractors for new bids and that construction will be commenced as soon as possible after new bids have been approved by the Executive Committee.

The meeting was adjourned at 1:15 P.M.

For your information, the personnel of the Executive, Sub-Advisory, and Engineers Advisory Committees are now as follows:

EXECUTIVE COMMITTEE

H.E. Marsh	Amerada Petroleum Corporation
H.B. Hurloy	Continental Oil Company
S.G. Sanddrson	Gulf Oil Corporation
John R. Suman	Humble Oil & Refining Company
Harry Leonard	Leonard Oil Company
H.J. Kemler	Shell Oil Company, Inc.
J.N. Dunlavey	Skelly Oil Company
A.M. McCorkle,	
Chairman	Stanolind Oil & Gas Company
H.S. Cole, Jr.	The Texas Company

SUB-ADVISORY COMMITTEE

Edgar Kraus	Atlantic Refining Company
Hugh Johnston	Continental Oil Company
D.A. Powell	Drilling & Exploration Co.
J.W. House	Humble Oil & Refining Co.
H.J. Kemler,	
Vice-Chairman	Shell Oil Company, Inc.
A.M. McCorkle,	
Chairman	Stanolind Oil & Gas Co.
H.S. Cole, Jr.	The Texas Company

ENGINEERS ADVISORY COMMITTEE

R.S. Christie	Amerada Petroleum Corporation
L.L. Gray	Gulf Oil Corporation
R.S. Dewey	Humble Oil & Refining Company
J.E. Warren	Carl B. King Drlg. Co.
P.E. Colliston	Phillips Petroleum Company
Robert Schuchle	Shell Oil Co., Inc.
C.G. Staley, Ump.	Lea County Operators Committee

Sgd. A.M. McCorkle
Chairman

The New Mexico (Lea County) operators respectfully recommend to the New Mexico Conservation Commission the adoption of a permanent gas-oil ratio order which will incorporate in its provisions the following points or ideas:

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The Oil Conservation Commission shall: (1) Assemble the information supplied by the operators as recommended above, and arrange test schedule; (2) assign engineers to supervise tests. Only in the event of an emergency shall company engineers be used as witnesses and they shall not be permitted to witness tests on their employer's property; (3) instruct all personnel in the proper operation of measuring equipment and procedure in conducting the test; (4) calibrate all metering equipment; (5) furnish, calculate, record and file all gas measurement charts and records; (6) compute all gas-oil ratios; (7) determine whether the test was properly conducted and if necessary schedule retests; (8) refuse to test wells not properly equipped in accordance with approved hookup.

3. Witness

The witness shall supervise: (1) the installation of the gas measuring equipment; (2) the proper operation of the equipment; (3) the proper gauging of the lease tanks to accurately determine the production of oil and water; (4) the proper recording of the pertinent data required; (5) the placing of seals on locking devices; (6) the witness shall take such other action as may be necessary to accomplish the desired purpose.

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- b. Tanks shall be gauged by the witness at the beginning and end of this stabilization period.
- c. No change shall be made which affects the rate of production during the last 12 hours of the stabilization period and during the entire test period.
- d. The test period shall consist of 24 hours. Oil and gas shall be gauged for the full period.
- e. In case of a step-cocked well, the oil and gas shall be measured for the time it is produced.
- f. If for any reason gas should be withdrawn from the casing, this volume of gas shall be added to that produced through tubing in computing the gas-oil ratio and such gas shall be measured for the full 48 hours of stabilization and test periods, and the largest volume whether the first or second 24 hour period, shall be used in computing the gas-oil ratio.
- g. For gas-lift or jotted wells, the total volume of gas to be used in computing the operating gas-oil ratio is the total output volume minus the total input volume. The total input volume must be metered.

5. Liquid Measurement

- a. All tanks shall be gauged to the nearest 1/8 inch. Care should be exercised to keep the gauge line taut and in case there are ripples or foam on the oil surface the tank should be allowed to stand until the fluid reaches equilibrium and the foam can be brushed aside.
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- e. Fluid level in the separator must be maintained relatively constant such that the oil dump valve is covered at all times by at least 12 inches of liquid.
- f. If it is necessary to use a flow tank for the separation of water the water-oil level must be the same at the beginning and end of test.
- g. All liquid measurements shall be in barrels of 42 gallons and shall be carried to the second decimal.

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- b. For computing the volume of all gas produced the standard of pressure shall be 10 oz. above an atmospheric pressure of 14.4 lbs. per sq. in. the standard temperature shall be 60° F. and the standard of specific gravity shall be 0.85 as compared to air. All measurements of gas shall

be adjusted by computation to these standards. In case the gas measurement is made at a pressure in excess of 100 $\frac{1}{2}$ #, the measurement shall be adjusted in accordance to deviation from Boyles Law. Gas volumes will be computed in cubic feet and gas-oil ratios in cubic feet per barrel of oil.

- c. Only 24 hour recording type gas measuring devices shall be used.
 - d. Orifice well testers, orifice meters and side pressure test nipples are approved. Side pressure nipples shall be used only when it is necessary to measure volumes larger than can conveniently be measured by orifice meter. A standard set of tables for each device will be on file in the office of the Deputy of the Commission.
- 7. Any well that cannot be tested, under the preceding rules shall be referred to the Oil Conservation Commission for special consideration and rules.
 - 8. The gas-oil ratio of a unit, regardless of the number of wells thereof, as applied in this order, shall be the total output gas less the total input gas divided by the barrels of oil produced.
 - 9.
 - a. A marginal unit is one which did not produce the acreage allowable for the pool in which the well is located during the standard gas-oil ratio test.
 - b. The ability of a marginal unit to produce as determined by its standard gas-oil ratio test shall be taken as the normal allowable of such a unit.
 - 10. The normal oil allowable of a non-marginal unit is the allowable it will receive before the gas-oil ratio adjustment is applied.
 - 11. A standard gas-oil ratio test shall be made on each well or unit in accordance with the rules as provided herein once each year. The tests shall be made not more than 60 days prior to the effective date of the gas-oil ratio survey for the pool in which the well or unit is located, as shown in Exhibit A attached.
 - 12. A standard gas-oil ratio test shall be made within 30 days after the completion of a new well, remedial work, work-over, clean-out, acidization or any changes which affect subsurface producing conditions. The effective date

of such tests shall be the beginning of the next succeeding monthly proration period except that the Commission must be notified that the well or unit is ready for test at least five days before the beginning of such proration period. Tests shall not be required due to changes in choke opening or in subsurface pumping equipment unless requested by the owner or operator of the well or unit. All wells included in this section shall be retested on the next regular survey either annual or semi-annual.

13. A standard gas-oil ratio test shall be made at the discretion of the Commission or its duly authorized deputy on any well or unit whenever a written request is submitted to the Commission or its duly authorized deputy by any operator in the pool in which the well or unit is located. Also, tests may be made on any wells selected by the Commission or its deputy for any reason whatsoever. The effective date of such tests shall be the same as provided in paragraph 12 above.
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17. The application of the gas-oil ratio adjustment shall be as follows:
 - a. The oil allocation shall be distributed to the various pools in the same manner used prior to February 1, 1940.

In each pool, except Hobbs and Monument, the total amount of oil allocated to marginal units not subject to the gas-oil ratio adjustment shall first be subtracted from the pool total oil allocation. Each remaining unit shall be given a percentage rating the value of such rating depending upon its gas-oil ratio. Each unit having a gas-oil ratio equal to or less than the maximum permitted that pool shall be rated at 100. The rating of units having a gas-oil ratio in excess of the permitted maximum shall be calculated according to the following fraction:

$$\text{rating} = \frac{\text{pool maximum gas-oil ratio} \times 100}{\text{unit gas-oil ratio}}$$

The remaining oil shall be distributed to each remaining unit in the ratio that the rating of each unit bears to the sum of all ratings in the pool.

- c. In the Hobbs and Monument Pools the proration schedule shall be calculated in the normal manner according to the order of the Commission for that field. Each unit having an allowable equal to or less than the average unit allowable for the pool shall be allowed to produce an amount of gas equal to the product of the permitted maximum gas-oil ratio of the pool multiplied by the average unit allowable; provided that a unit, the oil allowable of which has been adjusted by high gas-oil ratio shall not exceed its normal allowable.

Any unit having an allowable greater than the average unit allowable for that field shall be allowed to produce only that amount of gas determined by the product of the permitted maximum gas-oil ratio and its normal oil allowable. From the pool allocation shall be deducted the amount of oil allocated to marginal wells and wells adjusted for high gas-oil ratio. The remaining oil shall be distributed to the remaining adjusted wells in accordance with the pool proration plan.

- 18. Legal overage and shortage shall be handled as in the past. That is, the adjusted oil allowable shall be the current oil allowable plus approved shortage or the current allowable less the overage, whichever applies in the particular case.

19. In order to encourage repressuring or the maintenance of reservoir pressure, the volume of gas injected into the reservoir may be deducted from the output gas in determining the net gas-oil ratio. The exact manner of applying this section shall be determined after a public hearing before the Commission.
20. When remedial work has been completed on a unit an adjusted allowable will be granted from the date of starting such work, for a period not exceeding 60 days, calculated on the basis of the standard gas-oil ratio test made subsequent to remedial work.
21. Units producing from a reservoir designated by the Commission as predominately gas-bearing shall be exempt from gas-oil ratio adjustments. Provided, however, that no unit producing from such a reservoir shall be allowed to produce more oil than the average top allowable of a unit for the county in which it is located.
22. Units producing gas only from a reservoir not designated as a gas reservoir, as provided in Section 21 above, shall be allowed to produce only as much gas as would result in a reservoir voidage on a volumetric basis equal to that voided by an oil well producing with a maximum gas-oil ratio permitted for that reservoir.
23. Marginal units produced primarily for gas sale in a reservoir, as described in Section 22 above, shall be permitted to produce a volume not to exceed that permitted in Section 22 above.
24. Wells in newly discovered or undesignated pools shall be allowed to produce with a limiting gas-oil ratio of 2,000 cubic feet per barrel for purposes of allocation until a hearing shall have been called and testimony presented upon which a ratio can be set. Such hearing shall be called and rules issued within six months after the completion of the discovery well or upon the completion of ten producing wells in the new pool, whichever occurs first.
25. For purposes of oil allowable adjustment, only those gas-oil ratios taken under the supervision of the Conservation Commission and by its duly accredited deputy shall be used. Insofar as the proration of oil is concerned, gas-oil ratios reported monthly on Form C-104A shall not be used.

26. Exemptions shall be granted only after duly advertised public hearing.
27. In any case where it appears that serious inequities to property rights, or irreparable damage to a well or wells may be caused by the application of the gas-oil ratio adjustments above defined, the Commission shall postpone application of such penalties upon proper application for a hearing from the party or parties who may be injured, until such time as a hearing has been held and a decision reached. The decision of the Commission as a result of such hearing shall be retroactive to the date at which the gas-oil ratio adjustment became effective as to other wells in the field.

EXHIBIT A

EFFECTIVE DATE OR GAS-OIL RATIO SURVEYS

FIELD	TOTAL WELLS	COMMISSION MAXIMUM GAS-OIL RATIO	EFFECTIVE DATE			
			ANNUAL SURVEY		SEMI-ANNUAL SURVEY	
Arrowhead	73	5000	March	1	September	1
Cooper	90	10000	April	1	October	1
Corbin	1		March	1	September	1
Eaves	19	7000	April	1	October	1
Eunice	491	7000	June	1	December	1
Halfway	4		March	1	September	1
Hardy	117	7000	October	1	April	1
Hobbs	251	4000	October	1	April	1
Jal	19	10000	March	1	September	1
Langlie	126	7000	December	1	June	1
Lynch	10		March	1	September	1
N. Lynch	2		March	1	September	1
Lynn	25	5000	March	1	September	1
Mattix	143	7000	December	1	June	1
Monument	493	6000	August	1	February	1
North Penrose)	177	7000	January	1	July	1
South Penrose)			January	1	July	1
Rhodes	6	5000	April	1	October	1
Skaggs	3	5000	March	1	September	1
Skelly	68	7000	January	1	July	1
South Eunice	65	7000	March	1	September	1
West Eunice	6		March	1	September	1
South Lovington	34	2000	July	1	January	1
Vacuum	300	2000	July	1	January	1

Artesia, New Mexico
July 16, 1940

EDDY COUNTY OPERATORS

GENTLEMEN:

Attached hereto you will find suggestions to the Oil Conservation Commission relative to a permanent gas-oil ratio order, and an order calling for a hearing before the Commission in Santa Fe July 29, 1940.

While the suggestions to the Commission by the Lea County operators were intended to apply to Lea County only, any order written by the Commission will, doubtless, be applicable to the State as a whole. Therefore, I am suggesting that each operator in Eddy County make a study of the Lea County suggestions and if there are any additions or changes the writer will be glad to present them to the Commission for its consideration at the meeting to be held on the 29th.

Yours very truly,

Van S. Welch
Chairman Eddy County Operators

The New Mexico (Lea County) operators respectfully recommend to the New Mexico Conservation Commission the adoption of a permanent gas-oil ratio order which will incorporate in its provisions the following points or ideas:

All operating gas-oil ratio tests shall be taken by or under the supervision of the State Oil Conservation Commission.

1. Operator

The operator shall: (1) in accordance with existing rules and regulations of the Conservation Commission, equip each well to make conveniently a gas-oil ratio test, and shall equip same in accordance with an approved hookup; (2) furnish the Deputy of the Commission a complete list of his wells showing the type of metering equipment best adaptable for accurate gas measurement in accordance with rules contained herein. Such information shall include the size of vent line, size of orifice flange or connection available, and if possible, the desirable size of orifice in the orifice plate; (3) furnish sufficient and qualified lease labor to install and manipulate all lease equipment, including the installation and/or changing orifice, raising or lowering vent lines, etc., in preparation for and during gas-oil ratio tests conducted in accordance with this order.

2. Oil Conservation Commission

The Oil Conservation Commission shall: (1) Assemble the information supplied by the operators as recommended above, and arrange test schedule; (2) assign engineers to supervise tests. Only in the event of an emergency shall company engineers be used as witnesses and they shall not be permitted to witness tests on their employer's property; (3) instruct all personnel in the proper operation of measuring equipment and procedure in conducting the test; (4) calibrate all metering equipment; (5) furnish, calculate, record and file all gas measurement charts and records; (6) compute all gas-oil ratios; (7) determine whether the test was properly conducted and if necessary schedule retests; (8) refuse to test wells not properly equipped in accordance with approved hookup.

3. Witness

The witness shall supervise: (1) the installation of the gas measuring equipment; (2) the proper operation of the equipment; (3) the proper gauging of the lease tanks to accurately determine the production of oil and water; (4) the proper recording of the pertinent data required; (5) the placing of seals on locking devices; (6) the witness shall take such other action as may be necessary to accomplish the desired purpose.

4. Manner of Testing

- a. For the purpose of stabilization, each well shall be produced for a period of 24 hours at a rate as nearly as possible to the normal manner of operation but not less than the daily allowable the well would have without gas-oil ratio adjustment.
- b. Tanks shall be gauged by the witness at the beginning and end of this stabilization period.
- c. No change shall be made which affects the rate of production during the last 12 hours of the stabilization period and during the entire test period.
- d. The test period shall consist of 24 hours. Oil and gas shall be gauged for the full period.
- e. In case of a stop-cocked well, the oil and gas shall be measured for the time it is produced.
- f. If for any reason gas should be withdrawn from the casing, this volume of gas shall be added to that produced through tubing in computing the gas-oil ratio and such gas shall be measured for the full 48 hours of stabilization and test periods, and the largest volume whether the first or second 24 hour period, shall be used in computing the gas-oil ratio.
- g. For gas-lift or jotted wells, the total volume of gas to be used in computing the operating gas-oil ratio is the total output volume minus the total input volume. The total input volume must be metered.

5. Liquid Measurements

- a. All tanks shall be gauged to the nearest $1/8$ inch. Care should be exercised to keep the gauge line taut and in case there are ripples or foam on the oil surface the tank should be allowed to stand until the fluid reaches equilibrium and the foam can be brushed aside.
- b. Tanks shall be thieved immediately before and after the test and water percentage determined in accordance with A.P.I. specifications.
- c. The total volume of liquid produced shall be calculated in accordance with the latest strapping tables of the tanks.
- d. The net volume of oil shall be the total volume of fluid less the volume of B.S. and W. as determined by Paragraph "b" above.
- e. Fluid level in the separator must be maintained relatively constant such that the oil dump valve is covered at all times by at least 12 inches of liquid.
- f. If it is necessary to use a flow tank for the separation of water the water-oil level must be the same at the beginning and end of test.
- g. All liquid measurements shall be in barrels of 42 gallons and shall be carried to the second decimal.

6. Gas Measurement

- a. A calibrated pressure gauge shall be installed on each separator and readings taken periodically. In the event the operator chooses to conduct the test at a separator pressure in excess of 100 $\frac{lb}{sq. in.}$, a recording pressure gauge will be installed on the separator and the measured gas-oil ratio shall be increased by the measured or calculated volume of gas going to the tanks. Calculated volume shall be based on the gas-solubility vs pressure curves for the field or area in which the well is located.
- b. For computing the volume of all gas produced the standard of pressure shall be 10 oz. above an atmospheric pressure of 14.4 lbs. per sq. in. the standard temperature shall be 60° F. and the standard of specific gravity shall be 0.85 as compared to air. All measurements of gas shall

be adjusted by computation to these standards. In case the gas measurement is made at a pressure in excess of 100#, the measurement shall be adjusted in accordance to deviation from Boyles Law. Gas volumes will be computed in cubic feet and gas-oil ratios in cubic feet per barrel of oil.

- c. Only 24 hour recording type gas measuring devices shall be used.
 - d. Orifice well testers, orifice meters and side pressure test nipples are approved. Side pressure nipples shall be used only when it is necessary to measure volumes larger than can conveniently be measured by orifice meter. A standard set of tables for each device will be on file in the office of the Deputy of the Commission.
- 7. Any well that cannot be tested, under the preceding rules shall be referred to the Oil Conservation Commission for special consideration and rules.
 - 8. The gas-oil ratio of a unit, regardless of the number of wells thereon, as applied in this order, shall be the total output gas less the total input gas divided by the barrels of oil produced.
 - 9.
 - a. A marginal unit is one which did not produce the acreage allowable for the pool in which the well is located during the standard gas-oil ratio test.
 - b. The ability of a marginal unit to produce as determined by its standard gas-oil ratio test shall be taken as the normal allowable of such a unit.
 - 10. The normal oil allowable of a non-marginal unit is the allowable it will receive before the gas-oil ratio adjustment is applied.
 - 11. A standard gas-oil ratio test shall be made on each well or unit in accordance with the rules as provided herein once each year. The tests shall be made not more than 60 days prior to the effective date of the gas-oil ratio survey for the pool in which the well or unit is located, as shown in Exhibit A attached.
 - 12. A standard gas-oil ratio test shall be made within 30 days after the completion of a new well, remedial work, work-over, clean-out, acidization or any changes which affect subsurface producing conditions. The effective date

of such tests shall be the beginning of the next succeeding monthly proration period except that the Commission must be notified that the well or unit is ready for test at least five days before the beginning of such proration period. Tests shall not be required due to changes in choke opening or in subsurface pumping equipment unless requested by the owner or operator of the well or unit. All wells included in this section shall be retested on the next regular survey either annual or semi-annual.

13. A standard gas-oil ratio test shall be made at the discretion of the Commission or its duly authorized deputy on any well or unit whenever a written request is submitted to the Commission or its duly authorized deputy by any operator in the pool in which the well or unit is located. Also, tests may be made on any wells selected by the Commission or its deputy for any reason whatsoever. The effective date of such tests shall be the same as provided in paragraph 12 above.
14. A standard gas-oil ratio test shall be made semi-annually on all wells tested in accordance with paragraphs 11 and 13 above, which wells on the preceding test, had a gas-oil ratio in excess of 80% of the maximum provided for the pool in which the well is located. The tests shall be made not more than 60 days prior to the effective date for the pool in which the well or unit is located as shown in Exhibit A attached.
15. Wells which have not had a standard gas-oil ratio test made at the effective date for the pool in which the well is located shall receive no oil allowable until the succeeding monthly proration period after a test has been made.
16. The oil allowable of each well or unit producing with a gas-oil ratio in excess of the maximum provided for the pool in which the well or unit is located shall be adjusted as hereinafter provided. The maximum gas-oil ratio permitted each pool and undesignated area is shown in Exhibit A attached.
17. The application of the gas-oil ratio adjustment shall be as follows:
 - a. The oil allocation shall be distributed to the various pools in the same manner used prior to February 1, 1940.

In each pool, except Hobbs and Monument, the total amount of oil allocated to marginal units not subject to the gas-oil ratio adjustment shall first be subtracted from the pool total oil allocation. Each remaining unit shall be given a percentage rating the value of such rating depending upon its gas-oil ratio. Each unit having a gas-oil ratio equal to or less than the maximum permitted that pool shall be rated at 100. The rating of units having a gas-oil ratio in excess of the permitted maximum shall be calculated according to the following fraction:

$$\text{rating} = \frac{\text{pool maximum gas-oil ratio} \times 100}{\text{unit gas-oil ratio}}$$

The remaining oil shall be distributed to each remaining unit in the ratio that the rating of each unit bears to the sum of all ratings in the pool.

- c. In the Hobbs and Monument Pools the proration schedule shall be calculated in the normal manner according to the order of the Commission for that field. Each unit having an allowable equal to or less than the average unit allowable for the pool shall be allowed to produce an amount of gas equal to the product of the permitted maximum gas-oil ratio of the pool multiplied by the average unit allowable; provided that a unit, the oil allowable of which has been adjusted by high gas-oil ratio shall not exceed its normal allowable.

Any unit having an allowable greater than the average unit allowable for that field shall be allowed to produce only that amount of gas determined by the product of the permitted maximum gas-oil ratio and its normal oil allowable. From the pool allocation shall be deducted the amount of oil allocated to marginal wells and wells adjusted for high gas-oil ratio. The remaining oil shall be distributed to the remaining adjusted wells in accordance with the pool proration plan.

- 16. Legal overage and shortage shall be handled as in the past. That is, the adjusted oil allowable shall be the current oil allowable plus approved shortage or the current allowable less the overage, whichever applies in the particular case.

19. In order to encourage repressuring or the maintenance of reservoir pressure, the volume of gas injected into the reservoir may be deducted from the output gas in determining the net gas-oil ratio. The exact manner of applying this section shall be determined after a public hearing before the Commission.

20. When remedial work has been completed on a unit an adjusted allowable will be granted from the date of starting such work, for a period not exceeding 60 days, calculated on the basis of the standard gas-oil ratio test made subsequent to remedial work.

*E.P.G. Co
Hyd 67* 21. Units producing from a reservoir designated by the Commission as predominately gas-bearing shall be exempt from gas-oil ratio adjustments. Provided, however, that no unit producing from such a reservoir shall be allowed to produce more oil than the average top allowable of a unit for the county in which it is located.

" 22. Units producing gas only from a reservoir not designated as a gas reservoir, as provided in Section 21 above, shall be allowed to produce only as much gas as would result in a reservoir voidage on a volumetric basis equal to that voided by an oil well producing with a maximum gas-oil ratio permitted for that reservoir.

23. Marginal units produced primarily for gas sale in a reservoir, as described in Section 22 above, shall be permitted to produce a volume not to exceed that permitted in Section 22 above.

24. Wells in newly discovered or undesignated pools shall be allowed to produce with a limiting gas-oil ratio of 2,000 cubic feet per barrel for purposes of allocation until a hearing shall have been called and testimony presented upon which a ratio can be set. Such hearing shall be called and rules issued within six months after the completion of the discovery well or upon the completion of ten producing wells in the new pool, whichever occurs first.

25. For purposes of oil allowable adjustment, only those gas-oil ratios taken under the supervision of the Conservation Commission and by its duly accredited deputy shall be used. Insofar as the proration of oil is concerned, gas-oil ratios reported monthly on Form C-104A shall not be used.

26. Exemptions shall be granted only after duly advertised public hearing.
27. In any case where it appears that serious inequities to property rights, or irreparable damage to a well or wells may be caused by the application of the gas-oil ratio adjustments above defined, the Commission shall postpone application of such penalties upon proper application for a hearing from the party or parties who may be injured, until such time as a hearing has been held and a decision reached. The decision of the Commission as a result of such hearing shall be retroactive to the date at which the gas-oil ratio adjustment became effective as to other wells in the field.

EXHIBIT A

EFFECTIVE DATE OR GAS-OIL RATIO SURVEYS

FIELD	TOTAL WELLS	COMMISSION MAXIMUM GAS-OIL RATIO	EFFECTIVE DATE			
			ANNUAL SURVEY		SEMI-ANNUAL SURVEY	
Arrowhead	73	5000	March	1	September	1
Cooper	90	10000	April	1	October	1
Corbin	1		March	1	September	1
Eaves	19	7000	April	1	October	1
Eunice	491	7000	June	1	December	1
Halfway	4		March	1	September	1
Hardy	117	7000	October	1	April	1
Hobbs	251	4000	October	1	April	1
Jal	19	10000	March	1	September	1
Langlie	126	7000	December	1	June	1
Lynch	10		March	1	September	1
N. Lynch	2		March	1	September	1
Lynn	25	5000	March	1	September	1
Mattix	143	7000	December	1	June	1
Monument	493	6000	August	1	February	1
North Penrose)	177	7000	January	1	July	1
South Penrose)			January	1	July	1
Rhodes	6	5000	April	1	October	1
Skaggs	3	5000	March	1	September	1
Skelly	68	7000	January	1	July	1
South Eunice	65	7000	March	1	September	1
West Eunice	6		March	1	September	1
South Lovington	34	2000	July	1	January	1
Vacuum	300	2000	July	1	January	1

OIL CONSERVATION COMMISSION

September 18, 1940

C
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P
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Mr. R. S. Dewey
Humble Oil & Refining Company
Midland, Texas

Dear Sir:

I wish to thank you for your suggestion and constructive criticism regarding Rule 26 of the proposed regulations covering gas-oil ratios.

We have placed this letter in our files and will discuss it with our attorney, Mr. Livingston, when we take final action on the proposed regulations.

Very truly yours,

A. Andreas
State Geologist

AA:ik

HUMBLE OIL & REFINING COMPANY

MIDLAND, TEXAS
September 4, 1940

J. W. HOUSE

RECEIVED
STATE LAND OFFICE
SEP 6 9 07 AM '40
SANTA FE, N. M.

Mr. Frank Worden,
New Mexico Conservation Commission,
Sante Fe, New Mexico.

Dear Sir:

Pursuant to our conversation and your request, I submit a possible clarification of Rule 26 in the proposed regulations covering gas-oil ratios. At present this rule reads as follows: " -- Exemptions shall be granted only after duly advertised public hearings".

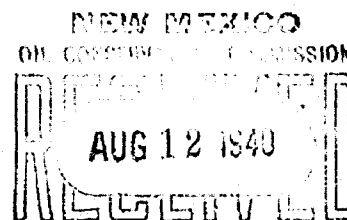
At the present time, the policy of the New Mexico Conservation Commission is to grant temporary exemptions to current gas-oil ratio orders. This policy might be continued in order to expedite the handling of exemptions demanding quick action. However, the majority of the operators felt that before a permanent exemption were granted, that any or all operators in the same pool in which exemption were granted, should have the opportunity to review the basis on which the exemption were requested and present testimony thereon, should they desire to do so. Every four or six months, or in conjunction with other called hearings, the New Mexico Conservation Commission might include in the call for the hearing, the request for testimony on the outstanding temporary exemptions then in effect. As a result of the hearing, the New Mexico Conservation Commission could either make the temporary exemptions permanent, or cancel them. Two or three hearings per year at which exemptions may be considered will not prove too burdensome to either the New Mexico Conservation Commission or the operators and will afford all interested parties an opportunity to obtain the facts relative to requests for exemptions and to present their views relative thereto.

Very truly yours,

J. W. HOUSE,

BY *R. S. Dewey*
R. S. Dewey

RSD:dhv
cc WEH.



Aug. 11, 1940.

Honorable John E. Miles, Governor
and Chairman, New Mexico Oil and
Gas Conservation Commission.
Santa Fe,
New Mexico:

Dear Sir;

On July 29th 1940 your special hearing on Gas*-Oil Ratios was recessed to August 12th. During this period the operators were to present to the Conservation Commission any pertinent suggestions concerning the problem of Gas-Oil Ratios in Lea County.

The Lea County Operators Committee presented a set of recommended regulations and Sun Oil Company has no objections to offer concerning same. We do feel that items 26 and 27 could be elaborated a bit to make them more workable and wish to suggest for your consideration the following:

26. "Exemptions shall be granted only after duly advertised public hearing" and after all offset operators to unit and tract in question shall have received notice of hearing by mail.

The purpose of the above would be to permit the applicant to obtain from such offset operators waivers of objections to the proposed objection after reviewing the applicants well condition. It would permit the elimination of unnecessary attendance, by such directly interested operators, at hearings at Santa Fe and would simplify the Commissions deliberations a great deal. Any contest would be clear and concise.

27. The Commission might wish to incorporate in this section a provision for the filing of objections or waivers by mail with the provision that such waivers shall not force the Commission to act in the affirmative.

This has been covered in a letter to Mr. A.M. McCorkle Chairman of the Lea County Operators Committee and he advises that time does not permit a full discussion by the operators and suggests this procedure on our part.

We would like to make this a part of the hearing on this subject and have this letter introduced as evidence.

Yours truly,

Sun Oil Company.

Col. Frank Worden, State Land Commissioner and Conservation Commissioner.

Hon. A. Andreas, State Geologist and Conservation Commissioner.

A.M. McCorkle, Stanolind Oil and Gas Co., Houston, Texas.

Jno. O. Pew, Sun Oil Co., Dallas, Texas.

MR. C. C. CRAGIN
EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

IN ORDER TO RETAIN JURISDICTION COMMISSION
MUST MEET ON DATE TO WHICH MEETING WAS RECESSED
AND THEN MAY PROMULGATE ORDER OF CONTINUANCE
TO AUGUST 26th.

NEW MEXICO STATE LAND OFFICE

August 8, 1940

Honorable James M. Murray
Hobbs, New Mexico

Re: Case No. 21, Gas-Oil Ratios.

Murray-Fanning No. 1 Gas Well,
Sec. 33-23S-37E, Skelly Area.

Dear Mr. Murray:

Reference is made to your request of August 7 wherein you desire the Commission to declare the above captioned well as a dry gas well and inapplicable to the proposed final gas-oil ratio order which may in the future be adopted.

This matter will be brought to the attention of the Commission.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik

cc- Mr. T. B. Suddreth
Hobbs, New Mexico

cc- Mr. B. A. Bowers
Petroleum Engineer
Hobbs, New Mexico

C

O

P

Y

August 8, 1940

Mr. C. P. Dimit, Vice-President
Phillips Petroleum Company
Bartlesville, Oklahoma

My dear Mr. Dimit: Re: Case No. 21, Gas-Oil Ratios.

Reference is made to your letter of August 5,
which will be brought to the attention of the Com-
mission.

It is especially noted that you desire that the
exemptions granted on the C. D. Woolworth Lease in the
Cooper Field be continued under whatever other final
gas-oil ratio order is adopted.

Please remember me very kindly to Mr. Hayes McCoy
of your Legal Department.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:lk

August 7, 1940

AIRMAIL

Mr. H. L. Johnston
Continental Oil Company
Hobbs, New Mexico

My dear Hugh:

Re: Case No. 21, adoption of final
order governing gas-oil ratios
in the various producing fields
in New Mexico.

Reference is made to your conversation by long distance with Mr. Worden relative to a continuance of the gas-oil ratio hearing noted in the caption from August 12th to August 26th.

It will be necessary for the Commission to meet on August 12th, the date to which the hearing was of record formally continued, and at that time the Commission can entertain and grant a request of continuance to the date desired. Mr. Worden states that Mr. Andreas is in Hobbs for the next two or three days, and you may discuss the matter of continuance with him.

Legally, the Commission cannot now take formal action of continuance, but the individual members of the Commission can consider the advisability of ordering a continuance when the Commission meets on August 12th.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
cc - Mr. A. Andreas
State Geologist
Oil Conservation Commission
Hobbs, New Mexico

AFFIDAVIT OF PUBLICATION

State of New Mexico, }
County of Lea

I, THOMAS G. SUMMERS
PUBLISHER

Of the Hobbs Daily News-Sun, a
daily newspaper published at Hobbs,
New Mexico, do solemnly swear that
the clipping attached hereto was
published once a week in the regular
and entire issue of said paper, and
not in a supplement thereof for a

period of ONE DAY weeks.

beginning with the issue dated JULY 12, 1940

and ending with the issue dated JULY 12, 1940

Thomas G. Summers
Publisher.

Sworn and subscribed to before me
this 13th day of

JULY, 1940
J. W. Barber
Notary Public.

My commission expires 10-17-43, 1943
(Seal)

This newspaper is duly qualified
to publish legal notices or ad-
vertisements within the mean-
ing of Section 3, Chapter 167,
Laws of 1937, and payment of
fee for said publication has
been made.

LEGAL NOTICE

Publish July 12, 1940
**NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION
COMMISSION**

Pursuant to Chapter 72, Session
Laws of 1935, State of New
Mexico, by which Act the Oil
Conservation Commission of New
Mexico was created, investing said
Commission with the jurisdiction
and authority over all matters
relating to the conservation of
oil and gas in this State and of
the enforcement of all provisions
of said Act, notice is hereby given
that a public hearing will be
held at the Capitol, Santa Fe, New
Mexico, on the 29th day of July,
1940, at ten o'clock A. M., for
the purpose of considering the
following:

Case No. 21
The adoption of a final order
governing gas-oil ratios in the
various producing fields in New
Mexico.

Any person having any inter-
est in the subject of the said
hearing shall be entitled to be
heard.

Given under the seal of said
Commission at Santa Fe, New
Mexico, on July 11, 1940.

**OIL CONSERVATION
COMMISSION**

By (Sgd.) John E. Miles,
Governor

(SEAL)

By (Sgd.) Frank Worden,
Commissioner of Public Lands

LEGAL NOTICE

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION
COMMISSION

Pursuant to Chapter 72, Session Laws of 1937, State of New Mexico, by which Act the Oil Conservation Commission of New Mexico was created, investing said Commission with the jurisdiction and authority over all matters relating to the conservation of oil and gas in this State and to the enforcement of all provisions of said Act, notice is hereby given that a public hearing will be held at the Capitol, Santa Fe, New Mexico, on the 29th day of July, 1940, at ten o'clock A. M. for the purpose of considering the following:

Order No. 11.

The adoption of a final order governing gas-oil ratios in the various producing fields in New Mexico.

Any person having any interest in the subject of the said hearing shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on July 11, 1940.

OIL CONSERVATION COMMISSION

By (Seal) JOHN R. MILNE, Governor.

By (Seal) FRANK WARDEN, Commissioner of Public Lands.

Witness my hand and seal at Santa Fe, New Mexico, July 12, 1940.

Affidavit of Publication

State of New Mexico, } ss.
 County of Santa Fe

I, C. B. Floyd, being first duly sworn, declare and say that I am the (Business Manager) (~~Editor~~) of the "Santa Fe New Mexican," a daily newspaper, published in the English Language, and having a general circulation in the City and County of Santa Fe, State of New Mexico, and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 of the Session Laws of 1937; that the publication, a copy which is hereto attached, was published in said paper once each week for 1 consecutive weeks, and on the same day of each week in the regular issue of the paper during the time of publication, and that the notice was published in the newspaper proper, and not in any supplement, once each week for 1 weeks consecutively, the first publication being on the 12th day of July, 1940 and the last publication on the 13th day of July, 1940; that payment for said advertisement has been (duly made), or (assessed as court costs); that the undersigned has personal knowledge of the matters and things set forth in this affidavit.

C. B. Floyd

Manager.

Subscribed and sworn to before me, this.....

13th day of July, A. D. 1940
Anna K. Ormsbee
 Notary Public.

My Commission expires

June 9, 1941

PUBLISHER'S BILL

38 lines, one time at \$ 3.04

..... lines, times, \$.....

Tax \$.....

Total - - - - - \$ 3.04

Received payment,

By.....

July 15, 1940

AIRMAIL

Honorable A. H. McCorkle
Stanolind Oil & Gas Company
Fort Worth, Texas

My dear Mr. McCorkle:

Reference is made to the carbon copy of your letter of July 11 addressed to Governor Niles, in which letter was enclosed recommendations of the Lea County Operators Committee regarding a final order in gas-oil ratio matters.

On the same said date, the Commission met and ordered a hearing on July 29. The publication of the notice of hearing, a copy of which is enclosed, no doubt has now been completed.

With kindest personal regards,

Cordially yours,

Carl B. Livingston
Attorney

CBL:ik
Enc.

Harry Leonard
Roswell, New Mexico


July 12, 1940

Mr. Carl B. Livingston
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Livingston:

I wish to thank you for the copy of Notice of
Hearing on the gas-oil ratios to be held in Santa Fe
on July 29, 1940.

Yours very truly,

A handwritten signature in cursive script, appearing to read "Harry Leonard".

Harry Leonard

hl:cv

OIL CONSERVATION COMMISSION

July 11, 1940

C

Santa Fe New Mexican
Santa Fe, New Mexico

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Gentlemen:

P

There is enclosed herewith a Notice for Publication, which you are kindly requested to publish once immediately. You are also requested to furnish this Commission with a copy containing this publication.

Immediately upon completion of the publication be sure to transmit to the Oil Conservation Commission your affidavit of publication.

Y

Upon sending to the Commission your affidavit of publication, please send your statement in duplicate and enclosed purchase voucher also in duplicate.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Encls.

OIL CONSERVATION COMMISSION

July 11, 1940

AIRMAIL
SPECIAL DELIVERY

Hobbs Daily News-Sun
Hobbs, New Mexico

Gentlemen:

There is enclosed herewith a Notice for Publication, which you are kindly requested to publish once immediately. You are also requested to furnish this Commission with a copy containing this publication.

Immediately upon completion of the publication be sure to transmit to the Oil Conservation Commission your affidavit of publication.

Upon sending to the Commission your affidavit of publication, please send your statement in duplicate and enclosed purchase voucher also in duplicate.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
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OIL CONSERVATION COMMISSION

July 11, 1940

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Honorable J. O. Seth
Attorney at Law
Santa Fe, New Mexico

Re: Case No. 21, adoption of final order
governing gas-oil ratios in the various
producing fields in New Mexico.

My dear Judge Seth:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
Enc.

OIL CONSERVATION COMMISSION

July 11, 1940

AIRMAIL

Honorable Glenn Staley
Proration Umpire
Hobbs, New Mexico

Re: Case No. 21, adoption of final order
governing gas-oil ratios in the
various producing fields in New
Mexico.

My dear Glenn:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CB:L:ik
Enc.

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OIL CONSERVATION COMMISSION

July 11, 1940

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Honorable Roy Yarbrough
Oil Conservation Commission
Hobbs, New Mexico

Dear Mr. Yarbrough:

Enclosed is a Notice for Publication regarding
a hearing to be held at Santa Fe on July 29th.

Please call at the Hobbs Daily News-Sun to see that
that paper publishes the notice which I am today
sending it and to urge them to be sure to return their
publisher's affidavit. I have had considerable diffi-
culty in getting that paper to send the publisher's
affidavit promptly. It is all important for jurisdic-
tion of the Commission sitting in its quasi judicial
capacity, so please keep an eye on this paper to see
that publication is made and the publisher's affidavit
made and forwarded to Santa Fe.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

July 11, 1940

AIRMAIL

Honorable Glenn Staley
Proration Umpire
Hobbs, New Mexico

Re: Case No. 21, adoption of final order
governing gas-oil ratios in the
various producing fields in New
Mexico.

My dear Glenn:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

OIL CONSERVATION COMMISSION

July 11, 1940

AIRMAIL

Honorable Harry Leonard
Roswell, New Mexico

Re: Case No. 21, adoption of final order
governing gas-oil ratios in the various
producing fields in New Mexico.

My dear Mr. Leonard:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

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Enc.

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July 11, 1940

Honorable H. M. Dow
Attorney at Law
Roswell, New Mexico

Re: Case No. 21, adoption of final order
governing gas-oil ratios in the various
producing fields in New Mexico.

My dear Governor Dow:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

July 11, 1940

Honorable Ernest A. Hanson
U. S. Geological Survey
Roswell, New Mexico

Re: Case No. 21, adoption of final order
governing gas-oil ratios in the various
producing fields in New Mexico.

My dear Mr. Hanson:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

July 11, 1940

Honorable C. J. Dexter
c/o C. J. Dexter Company
Artesia, New Mexico

Re: Case No. 21, adoption of final order
governing gas-oil ratios in the various
producing fields in New Mexico.

My dear Mr. Dexter:

Enclosed please find copy of Notice of
Hearing in the above captioned matter.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:lk
Enc.

CASE NO. 21

BEFORE THE OIL CONSERVATION COMMISSION
FOR THE STATE OF NEW MEXICO

HEARING RELATIVE TO ADOPTING
A FINAL ORDER GOVERNING GAS-
OIL RATIOS IN THE VARIOUS PRO-
DUCING FIELDS IN NEW MEXICO.

THE CAPITOL, SANTA FE, NEW MEXICO
JULY 29, 1940

Pursuant to notice, duly given and published, hearing
in the above entitled matter was convened in the Hall of the House
of Representatives, Capitol Building, Santa Fe, New Mexico, at
the hour of ten o'clock, A. M., of July 29th, 1940, the Commission
sitting as follows:

Hon. John E. Miles, Governor, Chairman of Commission
Hon. Frank Worden, Commissioner of Public Lands, Secretary
Hon. A. Andreas, State Geologist, Member
Hon. Carl E. Livingston, Attorney for Commission.

APPEARANCES:

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
Glenn Staley	Lea County Operators	Hobbs, New Mexico
R. K. Stovall	Culbertson & Irwin & Stovall	
J. H. Curtis	Culbertson & Irwin & R.K.Stovall	Jal, New Mexico
Martin Yates III	Yates Oil Co.	
R. T. Windfohr	Nash, Windfohr & Brown	
V. S. Welch	Flynn, Welch & Yates	
Harry Leonard	Leonard Oil Company	Roswell, New Mexico
M. Albertson	Shell Oil Co., Inc.	Houston, Texas
H. J. Kemler	Shell Oil Co.	Midland, Texas
A. E. Groff	Shell Oil Co.	Houston, Texas
Roy Yarbrough	Oil Conservation Commission	
H. S. Cole, Jr.	The Texas Co.	Fort Worth, Texas
J. W. Graybeal	Humble Oil & Rfg. Co.	Midland, Texas
J. W. House	Humble Oil & Rfg. Co.	" "
John R. Simon	Humble Oil & Rfg. Co.	Houston, Texas
B. F. Neisenwander	North Shore Corp.	Midland, Texas
J. N. Dunlavey	Skelly Oil Co.	Hobbs, New Mexico
W. K. Davis	El Paso Natural Gas Co.	Jal, New Mexico
C. L. Perkins	El Paso Natural Gas Co.	El Paso, Texas
J. S. Noland	Barnsdall Oil Co.	Tulsa, Oklahoma
J. S. Griffith	Humble Oil & R. Co.	Roswell, New Mexico
J. G. Benton	Westates Pet. Corp.	Jal, New Mexico
James W. Murray	Me-Tex	Hobbs, New Mexico
Howard P. Holmes	Two States Oil Co.	Dallas, Texas
J. P. Cusack	J. P. Cusack, Inc.	Midland, Texas
R. S. Christie	Amerada Pet. Corp.	Fort Worth, Texas
Lloyd L. Gray	Gulf Oil Corp.	Tulsa, Oklahoma
S. G. Sanderson	Gulf Oil Corp.	" "
H. D. Bedford	Gulf Oil Corp.	Roswell, New Mexico
Geo. P. Livermore	Great Western Prod., Inc.	Odessa, Texas
N. E. Larsh	Repollo Oil Co.	Midland, Texas
C. C. Cragin	El Paso Natural Gas Co.	El Paso, Texas
A. L. Forbes, Jr.	El Paso Natural Gas Co.	El Paso, Texas
G. D. Macy		Santa Fe, New Mexico
C. L. Talmadge	Independent	Santa Fe, New Mexico

H. L. Johnston	Continental Oil Co.	Hobbs, New Mexico
H. B. Hurley	Continental Oil Co.	Fort Worth, Texas
Neville G. Penrose	Neville Penrose, Inc.	Fort Worth, Texas
F. J. Danglade	Independent	Lovington, New Mexico
Barney Codsbine	Independent	Lubbock, Texas
F. W. Brigance	Rowan Drilling Co.	Fort Worth, Texas
Dewey A. Jordan	Atlantic Refg. Co.	Midland, Texas
Rex E. Rader	Stanolind Oil & Gas Co.	Hobbs, New Mexico
G. H. Card	Stanolind Oil & Gas Co.	Fort Worth, Texas
C. A. Daniels	Phillips Petroleum Co.	Amarillo, Texas
D. R. McKeithan	Phillips Petroleum Co.	Bartlesville, Okla.
J. O. Seth	Stanolind Oil & Gas Co.	Santa Fe, New Mexico
A. M. McCorkle	Lea County Operators Com.	Fort Worth, Texas
R. G. Schuehle	Shell Oil Co.	Midland, Texas
F. E. Heath	Sun Oil Co.	Dallas, Texas
D. D. Bodie	Cities Service Oil Co.	Hobbs, New Mexico

The hearing was called to order by Governor Miles, at whose request Mr. Livingston read the Notice for Publication of the call of the hearing, as follows:

"NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Pursuant to Chapter 72, Session Laws of 1935, State of New Mexico, by which Act the Oil Conservation Commission of New Mexico was created, investing said Commission with the jurisdiction and authority over all matters relating to the conservation of oil and gas in this State and of the enforcement of all provisions of said Act, notice is hereby given that a public hearing will be held at the Capitol, Santa Fe, New Mexico, on the 29th day of July, 1940, at ten o'clock A. M., for the purpose of considering the following:

Case No. 21.

The adoption of a final order governing gas-oil ratios in the various producing fields in New Mexico.

Any person having any interest in the subject of the said hearing shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on July 11, 1940."

BY MR. WORDEN: You have heard the reading of the notice. Now the Commission is ready to proceed.

BY MR. SETH: On behalf of Lea County Operators' Committee we would like to present some evidence, with the understanding that, so far as we are concerned, it applies only to Lea County. May we proceed on that theory?

BY MR. WORDEN: Proceed.

BY MR. SETH: We would like to offer in evidence a transcript of the

testimony taken on December 9th, 1939, pursuant to a call for hearing on the gas-oil ratios. These are official files of the Commission.

(Marked Lea County Operators Committee Exhibit No. 1)

We would like to offer in evidence transcript of Case No. 19, involving the hearing held March 5th, 1940 on gas-oil ratios. This transcript is also from the official files of the Commission, and is, I believe, the basis for the outstanding orders Nos. 238, 250 and 259, which is a temporary order, renewed every two weeks.

(Marked Lea County Operators Committee Exhibit No. 2)

We would like to offer in evidence, and have the Commission consider the testimony and other showings that have been made with respect to the various exceptions from the existing gas-oil ratio. I have not that available, but it is in the files of the Commission.

GLENN STALEY,

being called as a witness on behalf of the Lea County Operators Committee, and being first duly sworn to tell the truth, the whole truth and nothing but the truth, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q State your name, please.

A Glenn Staley.

Q What is your position, Mr. Staley?

A I am Chairman of the Engineering Committee of the Lea County Operators Committee, and deputy of the Oil Conservation Commission of the State of New Mexico.

Q Are you in charge of the office of the Lea County Operators Committee at Hobbs?

A I am.

Q Mr. Staley, how long have you been connected with the oil industry at Hobbs?

A Ten years.

Q Are you familiar with the wells, the the record of wells kept

in your office?

A I am.

Q The existing order of the Commission states that that order is intended to continue in effect pending the completion of the oil gas survey then in progress in Lea County. You recall that in the present order of the Commission?

A I do.

Q Has that gas-oil ratio survey been completed in Lea County?

A Practically.

Q And under whose supervision has that gas-oil ratio survey been made? I mean, was it under your supervision?

A It has.

Q In your opinion has this survey been made accurately and by competent people?

A It has.

Q Has the result of that survey been filed with the Commission?

A It has.

BY MR. SETH: I desire to offer that in evidence.

(This report is in the files of the Commission and not marked)

Q Have the results of that survey been considered by the Engineering Committee of which you are Chairman?

A Yes sir.

Q Have they made recommendations?

A They have.

Q As to suggested outline of a gas-oil ratio order?

A Yes, sir.

Q You know, of course, that a suggested form of order has been made to the Commission and transmitted to the Commission?

A Yes, sir.

Q Did those suggestions meet the approval of the Engineering Committee, to your knowledge?

A Practically so, yes, sir.

Q Mr. Staley, is there anything further in connection with the making of the survey you desire to bring up at this time?

A No.

Q In your judgment, the figures shown in the report of this survey accurately set out the gas-oil ratios of the various wells in Lea County?

A Yes, as near accurate as we were able to get them under existing conditions.

BY MR. GEORGE LIVERMORE:

Q What percentage of the gas-oil ratios in the so-called sand belt were in at the time they were considered?

A I would judge about 60% -- I am not sure, at the time the engineering committee got them -- they were doing a good deal of remedial work in that area. Operators were not in position to take ratios in a good many cases.

Q Was it that high?

A I would not say that is accurate, but in that neighborhood.

Q I was under the impression it was less than that.

BY MR. SETH: Mr. Livermore, in his questions, reminded me of something I want to get in the record.

Q Has remedial work on the various wells with high gas-oil ratios been carried on generally in Lea County pools?

A It has.

Q Has that remedial work been going on several years?

A It has.

Q Is there a compilation made of the remedial work that the operators have done?

A There is the monthly engineering reports, issued every month, setting out the remedial work done in various areas where the information has been submitted to our office.

Q Has that practice, of including that in the monthly engineering report, continued over a considerable time?

A Over quite a number of years.

Q Are those engineering reports filed with the Commission?

A Yes, sir.

BY MR. SETH: We would like to offer that information, contained in each monthly report of the Engineering Committee of the Lea County Operators Committee to show that remedial work

has been constantly carried on in Lea County.

(These reports, being in the files of the Commission, were not marked as exhibits).

Witness dismissed.

A. M. McCORKLE,

being called as a witness on behalf of the Lea County Operators' Committee, and being first duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q Please state your name.

A A. M. McCorkle.

Q You are Vice-President of the Stanolind Oil and Gas Company?

A I am.

Q And Chairman of the Lea County Operators Committee?

A I am.

Q You heard Mr. Staley's testimony with respect to the recommendation of the Lea County Engineering Committee?

A I did.

Q Did you submit the report of the Engineering Committee to the various operators in Lea County?

A I did.

Q Sent everyone a copy?

A I did.

Q Did you call a meeting at the same time?

A I did.

Q Will you state what action was taken at this meeting with respect to approval or disapproval of the engineering report?

A The operators, the Lea County operators that attended this meeting approved the report after several more or less minor changes, which had been suggested, were made.

Q Did you receive some suggestions from operators who were not represented at the meeting, as well as those present?

A Yes, sir.

Q All operators were furnished with a copy of the report and invited to submit criticisms and changes?

A Yes, sir.

Q Did you transmit to the Commission the recommendations of those present at the meeting, I believe on July 12th?

A July 10th. Yes, in accordance with instructions -- or a resolution passed at that meeting, I transmitted the recommendations to the New Mexico Oil Conservation Commission, with the request that they call a hearing at an early date, or on July 29th, or any date more suitable, to consider evidence for the promulgation of a final order governing gas-oil ratios in Lea County.

Q These operators and engineering committee recommendations are confined to pools in Lea County?

A Yes, sir.

BY MR. SETH: I believe that is all. We will have the next witness read the recommendations.

BY MR. WORDEN: Anybody else wish to ask the witness any questions?
(No response).

Witness dismissed.

R. G. SCHEUHELE,

being called as a witness on behalf of the Lea County Operators Committee, and being first duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q State your name, please.

A R. G. Scheuhele.

Q What is your profession?

A Petroleum engineer.

Q By whom are you employed?

A Shell Oil Company.

Q How long have you been engaged in practicing petroleum engineering?

A For eight years.

Q Are you familiar with the pools, generally, in Lea County?

A I am.

Q How long have you been connected with Shell's operations in Lea County?

A Seven years.

Q You, I believe, are a graduate petroleum engineer?

A I am.

Q Are you a member of the Hobbs -- Lea County Engineering Committee?

A Yes, I am.

Q Did you attend the meeting of the committee at which the committee considered the results of the gas-oil ratio survey made that Mr. Staley testified about?

A Yes, I did.

Q Did that committee make recommendations of a suggested form of gas-oil ratio order to be put into effect in Lea County?

A Yes, they did.

Q Is that the recommendation Mr. McCorkle testified was submitted to all operators?

A It is.

Q Have you those recommendations? (Witness displays report)
I wish you would read them so that everyone present can hear them.

A I have them right here. (Reading:)

"The New Mexico (Lea County) operators respectfully recommend to the New Mexico Conservation Commission the adoption of a permanent gas-oil ratio order which will incorporate in its provisions the following points or ideas:

All operating gas-oil ratio tests shall be taken by or under the supervision of the State Oil Conservation Commission.

1. Operator

The operator shall: (1) in accordance with existing rules and regulations of the Conservation Commission, equip each well to make conveniently a gas-oil ratio test, and shall equip same in accordance with an approved hookup; (2) furnish the Deputy

of the Commission a complete list of his wells showing the type of metering equipment best adaptable for accurate gas measurement in accordance with rules contained herein. Such information shall include the size of vent line, size of orifice flange or connection available, and if possible, the desirable size of orifice in the orifice plate; (3) furnish sufficient and qualified lease labor to install and manipulate all lease equipment, including the installation and/or changing orifice, raising or lowering vent lines, etc., in preparation for and during gas-oil ratio tests conducted in accordance with this order.

2. Oil Conservation Commission

The Oil Conservation Commission shall: (1) Assemble the information supplied by the operators as recommended above, and arrange test schedule; (2) assign engineers to supervise tests. Only in the event of an emergency shall company engineers be used as witnesses and they shall not be permitted to witness tests on their employer's property; (3) instruct all personnel in the proper operation of measuring equipment and procedure in conducting the test; (4) calibrate all metering equipment; (5) furnish, calculate, record and file all gas measurement charts and records; (6) compute all gas-oil ratios; (7) determine whether the test was properly conducted and if necessary schedule retests; (8) refuse to test wells not properly equipped in accordance with approved hookup.

3. Witness

The witness shall supervise: (1) the installation of the gas measuring equipment; (2) the proper operation of the equipment; (3) the proper gauging of the lease tanks to accurately determine the production of oil and water; (4) the proper recording of the pertinent data required; (5) the placing of seals on locking devices; (6) the witness shall take such other action as may be necessary to accomplish the desired purpose.

4. Manner of testing

a. For the purpose of stabilization, each well shall be produced for a period of 24 hours at a rate as nearly as possible

to the normal manner of operation but not less than the daily allowable the well would have without gas-oil ratio adjustment.

- b. Tanks shall be gauged by the witness at the beginning and end of this stabilization period.
- c. No change shall be made which affects the rate of production during the last 12 hours of the stabilization period and during the entire test period.
- d. The test period shall consist of 24 hours. Oil and gas shall be gauged for the full period.
- e. In case of a stop-cocked well, the oil and gas shall be measured for the time it is produced.
- f. If for any reason gas should be withdrawn from the casing, this volume of gas shall be added to that produced through tubing in computing the gas-oil ratio and such gas shall be measured for the full 48 hours of stabilization and test periods, and the largest volume whether the first or second 24 hour period, shall be used in computing the gas-oil ratio.
- g. For gas-lift or jetted wells, the total volume of gas to be used in computing the operating gas-oil ratio is the total output volume minus the total input volume. The total input volume must be metered.

5. Liquid Measurements

- a. All tanks shall be gauged to the nearest 1/8 inch. Care should be exercised to keep the gauge line taut and in case there are ripples or foam on the oil surface the tank should be allowed to stand until the fluid reaches equilibrium and the foam can be brushed aside.
- b. Tanks shall be thieved immediately before and after the test and water percentage determined in accordance with A.P.I. specifications.
- c. The total volume of liquid produced shall be calculated in accordance with the latest strapping tables of the tanks.
- d. The net volume of oil shall be the total volume of fluid less the volume of W. and G. as determined by paragraph "b"

above.

- e. Fluid level in the separator must be maintained relatively constant such that the oil dump valve is covered at all times by at least 12 inches of liquid.
- f. If it is necessary to use a flow tank for the separation of water the water-oil level must be the same at the beginning and end of test.
- g. All liquid measurements shall be in barrels of 42 gallons and shall be carried to the second decimal.

6. Gas Measurement

- a. A calibrated pressure gauge shall be installed on each separator and readings taken periodically. In the event the operator chooses to conduct the test at a separator pressure in excess of 100 lbs. a recording pressure gauge will be installed on the separator and the measured gas-oil ratio shall be increased by the measured or calculated volume of gas going to the tanks. Calculated volume shall be based on the gas-solubility vs pressure curves for the field or area in which the well is located.
- b. For computing the volume of all gas produced the standard of pressure shall be 10 oz. above an atmospheric pressure of 14.4 lbs. per sq. in. the standard temperature shall be 60° F. and the standard of specific gravity shall be 0.85 as compared to air. All measurements of gas shall be adjusted by computation to these standards. In case the gas measurement is made at a pressure in excess of 100 lbs., the measurement shall be adjusted in accordance to deviation from Boyles Law. Gas volumes will be computed in cubic feet and gas-oil ratios in cubic feet per barrel of oil.
- c. Only 24 hour recording type gas measuring devices shall be used.
- d. Orifice well testers, orifice meters and side pressure test nipples are approved. Side pressure nipples shall be used only when it is necessary to measure volumes larger than can conveniently be measured by orifice meter. A

standard set of tables for each device will be on file in the office of the Deputy of the Commission.

7. Any well that cannot be tested, under the preceding rules shall be referred to the Oil Conservation Commission for special consideration and rules.
8. The gas-oil ratio of a unit, regardless of the number of wells thereon, as applied in this order, shall be the total output gas less the total input gas divided by the barrels of oil produced.
9.
 - a. A marginal unit is one which did not produce the acreage allowable for the pool in which the well is located during the standard gas-oil ratio test.
 - b. The ability of a marginal unit to produce as determined by its standard gas-oil ratio test shall be taken as the normal allowable of such a unit.
10. The normal oil allowable of a non-marginal unit is the allowable it will receive before the gas-oil ratio adjustment is applied.
11. A standard gas-oil ratio test shall be made on each well or unit in accordance with the rules as provided herein once each year. The tests shall be made not more than 60 days prior to the effective date of the gas-oil ratio survey for the pool in which the well or unit is located, as shown in Exhibit A attached.
12. A standard gas-oil ratio test shall be made within 30 days after the completion of a new well, remedial work, work-over, clean-out, acidization or any changes which affect subsurface producing conditions. The effective date of such tests shall be the beginning of the next succeeding monthly proration period except that the Commission must be notified that the well or unit is ready for test at least five days before the beginning of such proration period. Tests shall not be required due to changes in choke opening or in subsurface pumping equipment unless requested by the owner or operator of the well or unit. All wells included in this section shall be retested on the next regular survey either annual or semi-annual.
13. A standard gas-oil ratio test shall be made at the discretion of the Commission or its duly authorized deputy on any well or

unit whenever a written request is submitted to the Commission or its duly authorized deputy by any operator in the pool in which the well or unit is located. Also, tests may be made on any wells selected by the Commission or its deputy for any reason whatsoever. The effective date of such tests shall be the same as provided in paragraph 12 above.

14. A standard gas-oil ratio test shall be made semi-annually on all wells tested in accordance with paragraphs 11 and 13 above, which wells on the preceding test, had a gas-oil ratio in excess of 80% of the maximum provided for the pool in which the well is located. The tests shall be made not more than 60 days prior to the effective date for the pool in which the well or unit is located as shown in Exhibit A attached.
15. Wells which have not had a standard gas-oil ratio test made at the effective date for the pool in which the well is located shall receive no oil allowable until the succeeding monthly proration period after a test has been made.
16. The oil allowable of each well or unit producing with a gas-oil ratio in excess of the maximum provided for the pool in which the well or unit is located shall be adjusted as herein-after provided. The maximum gas-oil ratio permitted each pool and undesignated area is shown in Exhibit A attached.
17. The application of the gas-oil ratio adjustment shall be as follows:
 - a. The oil allocation shall be distributed to the various pools in the same manner used prior to February 1, 1940. In each pool, except Hobbs and Monument, the total amount of oil allocated to marginal units not subject to the gas-oil ratio adjustment shall first be subtracted from the pool total oil allocation. Each remaining unit shall be given a percentage rating the value of such rating depending upon its gas-oil ratio. Each unit having a gas-oil ratio equal to or less than the maximum permitted that pool shall be rated at 100. The rating of units having a gas-oil ratio in excess of the permitted maximum shall be calculated

according to the following fraction:

$$\text{rating} = \frac{\text{pool maximum gas-oil ratio} \times 100}{\text{unit gas-oil ratio}}$$

The remaining oil shall be distributed to each remaining unit in the ratio that the rating of each unit bears to the sum of all ratings in the pool.

- c. In the Hobbs and Monument Pools the proration schedule shall be calculated in the normal manner according to the order of the Commission for that field. Each unit having an allowable equal to or less than the average unit allowable for the pool shall be allowed to produce an amount of gas equal to the produce of the permitted maximum gas-oil ratio of the pool multiplied by the average unit allowable; provided that a unit, the oil allowable of which has been adjusted by high gas-oil ratio shall not exceed its normal allowable.

Any unit having an allowable greater than the average unit allowable for that field shall be allowed to produce only that amount of gas determined by the product of the permitted maximum gas-oil ratio and its normal oil allowable. From the pool allocation shall be deducted the amount of oil allocated to marginal wells and wells adjusted for high gas-oil ratio. The remaining oil shall be distributed to the remaining adjusted wells in accordance with the pool proration plan.

18. Legal overage and shortage shall be handled as in the past. That is, the adjusted oil allowable shall be the current oil allowable plus approved shortage or the current allowable less the overage, whichever applies in the particular case.
19. In order to encourage repressuring or the maintenance of reservoir pressure, the volume of gas injected into the reservoir may be deducted from the output gas in determining the net gas-oil ratio. The exact manner of applying this section shall be determined after a public hearing before the Commission.
20. When remedial work has been completed on a unit an adjusted allowable will be granted from the date of starting such work, for a period not exceeding 60 days, calculated on the basis of the standard gas-oil ratio test made subsequent to remedial work.

21. Units producing from a reservoir designated by the Commission as predominately gas-bearing shall be exempt from gas-oil ratio adjustments. Provided, however, that no unit producing from such a reservoir shall be allowed to produce more oil than the average top allowable of a unit for the county in which it is located.
22. Units producing gas only from a reservoir not designated as a gas reservoir, as provided in Section 21 above, shall be allowed to produce only as much gas as would result in a reservoir voidage on a volumetric basis equal to that voided by an oil well producing with a maximum gas-oil ratio permitted for that reservoir.
23. Marginal units produced primarily for gas sale in a reservoir, as described in Section 22 above, shall be permitted to produce a volume not to exceed that permitted in Section 22 above.
24. Wells in newly discovered or undesignated pools shall be allowed to produce with a limiting gas-oil ratio of 2,000 cubic feet per barrel for purposes of allocation until a hearing shall have been called and testimony presented upon which a ratio can be set. Such hearing shall be called and rules issued within six months after the completion of the discovery well or upon the completion of ten producing wells in the new pool, whichever occurs first.
25. For purposes of oil allowable adjustment, only those gas-oil ratios taken under the supervision of the Conservation Commission and by its duly accredited deputy shall be used. Insofar as the proration of oil is concerned, gas-oil ratios reported monthly on Form C-104A shall not be used.
26. Exemptions shall be granted only after duly advertised public hearing.
27. In any case where it appears that serious inequities to property rights, or irreparable damage to a well or wells may be caused by the application of the gas-oil ratio adjustments above defined, the Commission shall postpone application of such penalties upon proper application for a hearing from the party or parties

who may be injured, until such time as a hearing has been held and a decision reached. The decision of the Commission as a result of such hearing shall be retroactive to the date at which the gas-oil ratio adjustment became effective as to other wells in the field.

E X H I B I T A

EFFECTIVE DATE OR GAS-OIL RATIO SURVEYS

FIELD	TOTAL WELLS	COMMISSION MAXIMUM GAS-OIL RATIO	EFFECTIVE DATE		
			ANNUAL SURVEY	SEMI-ANNUAL SURVEY	
Arrowhead	73	5000	March	1	September 1
Cooper	90	10000	April	1	October 1
Corbin	1		March	1	September 1
Eaves	10	7000	April	1	October 1
Eunice	491	7000	June	1	December 1
Halfway	4		March	1	September 1
Hardy	117	7000	October	1	April 1
Hobbs	251	4000	October	1	April 1
Jal	19	10000	March	1	September 1
Langlie	126	7000	December	1	June 1
Lynch	10		March	1	September 1
N. Lynch	2		March	1	September 1
Lynn	25	5000	March	1	September 1
Mattix	143	7000	December	1	June 1
Monument	493	6000	August	1	February 1
North Penrose)	177	7000	January	1	July 1
South Penrose)			January	1	July 1
Rhodes	6	5000	April	1	October 1
Skaggs	3	5000	March	1	September 1
Skelly	68	7000	January	1	July 1
South Eunice	65	7000	March	1	September 1
West Eunice	6		March	1	September 1
South Lovington	34	2000	July	1	January 1
Vacuum	300	2000	July	1	January 1"

A That completes the recommendations, with Exhibit A.

Q Mr. Scheuhle, what you have just read represents the recommendations of the Lea County Engineering Committee?

A It does.

Q Is that committee made up of engineers representing the various operators in Lea County?

A There are state engineers represented. They are all employed by some operator, functioning as a committee of operators.

Q The other members, besides the state employees, are engineers working in Lea County and familiar with the Lea County pools?

A That is right.

Q Was it from experience in those pools, and experience in the Engineering Committee as a whole, taking into consideration as well the result of the gas-oil ratio survey made by the Commission, that these recommendations were made?

A That is right.

Q Is it your opinion as a petroleum engineer familiar with the Lea County pools that these regulations are proper?

A I believe they are.

Q What would you say in that respect concerning the maximum gas-oil ratio prescribed for each pool -- you believe these are proper in that respect?

A I believe it is as equitable as can be arrived at at the present time.

Q You believe these gas-oil ratios, and the maximums set out in the appendix tend to prevent waste and improve the ultimate production of oil from every pool?

A I do.

Q Do you believe it will serve to prevent waste and conserve reservoir energy in each pool?

A Yes, sir.

Q And thereby make for larger ultimate recovery?

A That is right.

BY MR. HOWARD HOLMES:

I might say, in the first place, I am thoroughly in accord with the idea of conservation. I would like to ask a few questions in regard to the information with which the Engineering Committee worked.

Q Did you have sufficient information, Mr. Scheuhle, to lay your finger on a specific well, or forty-acre tract, in any one of the main pools, to testify whether the ratio of oil in place and gas in place are in proportion as you have set out?

A I think it is an error to attempt to make any general rule apply to any small detail, or specific case, but it will ultimately arrive at much that same point.

Q What you are saying is that on an average it will arrive at that point?

A That is it.

Q Do you recognize the elements of the case, which is primarily that we are working with property rights and equities? Has any discussion been had of that fact? In your engineering meetings or has it been discussed?

A The fundamental basis of that rule is to apportion all operators their equal share of reservoir energy, and that is based entirely on that premise.

Q That is so for the whole field, but regarding a particular eighty or forty-acre tract, has there been engineering information enough to pass judgment?

A It depends on how far you want to carry -- to what extent you would want to carry it.

Q What I am driving at is, this is more than an engineering problem?

A A problem in engineering and economics.

Q And also it has something to do with structure of the formation, the size of the gas reservoir, the thickness of the gas reservoir, in proportion to the volume of oil in place.

A All those points have been thoroughly looked into.

Q With respect to specific structures?

A Two States Morris No. 1 has not been looked up. It was looked

into at about this point on the structure, and should have so much energy. I didn't examine that particular well to see if the top producing zone was 570 or 571 below sea level or whether it was around 580 feet.

Q At the time we drove our wells, on advice of geologic counsel, we were very careful to take very careful samples, particularly while drilling in below the pipe, and very careful to get drilling times, which we hoped would give information on this section. We didn't rely upon information from offset wells. There is a great variation between wells, and we have reason to think between various pools. There are serious and decided variations as between wells in different sections, -- wells on different forty-acre tracts, wells in the north or south, wells in the east or west.

A Such variations may lead to inequities, but relief for any inequity is provided for in Section 27. (Reading) "In any case where it appears that serious inequities to property rights, or irreparable damage to a well or wells may be caused by the application of the gas-oil ratio adjustments above defined, the Commission shall postpone application of such penalties upon proper application for a hearing from the party or parties who may be injured, until such time as a hearing has been held and a decision reached."

Q We are putting in a positive thing; we are presumably putting it in upon the basis of adequate information to render a decision. The item of recourse is fine. I think we must always have a recourse. Do you have any reason to feel sure, within ten per cent of being right on any one of these pools?

A I think within ten per cent.

Q Did you -- I believe Mr. Staley testified that about 60% of the tests were in on the Langley pool. Have you any reason -- have you enough information on that pool to decide that those wells, which comprise 60% of the wells in the pool, are typical or are you assuming they are?

A I would have to see the 60%. But the Engineering Committee is

sufficiently familiar with the area to be able to examine a list of 60% and tell whether they are representative or not representative.

Q As I remember, in this field we have been working out here a considerable length of time. Certain wells were drilled in 1928 with a given degree of information; and with other wells drilled in 1932 with more information; others in 1936, others in 1939 and others in 1940 with correspondingly more information. Taking into consideration the fact that wells were drilled in good faith; all efforts have been made to operate them as well as can be done. Has there been any operator who drilled his well in good faith, but without the information that is available now,- the man drilled his well and set his pipe high, and shot it,- what loading has been given it?

A That is answered, I think, by Section 27. All operators, the whole practice has been examined and the various discussions have covered very near all points.

Q I would like merely to say that my questions are leading up to this point: We are heartily in favor of conservation; we think it very important, and worth while to protect the oil in any manner. We are a little concerned, this order is recommended as a permanent order, and without going on with the tests we think there are conditions which have not been thoroughly enough investigated to make it applicable to particular wells. That is all I intended to bring out by my questions. As you point out, the regulations provide for the ascertainment by the Commission of the fact that there are inequities being done in any particular well?

A That is right.

Witness dismissed.

BY MR. SETH: That is all we desire to offer for Lea County operators.

BY MR. C. C. CRAGIN: I represent the El Paso Natural Gas Company.

We wish to enter a protest to the issuing of this order in its present form. We represent something in excess of 85% of

the gas industry of the State of New Mexico, and except by exemptions, if this order is put into effect -- and it states exemptions shall be granted only after due hearing. We estimate our take from the 4000000 feet taken today to be 3800000 feet; that the area served by us, from Carlsbad, through Artesia and down to El Paso, through which area we serve about 90% of the gas consumed, would be cut off immediately. They have a very low rate, and all other users of gas have priority over that area. I have talked with several members of the Executive Committee, and I think we would be able, if we could get together with the Executive Committee, - our objections would be composed and would have our whole hearted support.

We were not notified of the Midland Meeting or the Fort Worth meeting, from which these recommendations emanated. We got hold of this copy for the first time yesterday. We would like about half an hour or three-quarters of an hour with our attorney, and an hour with the Executive Committee. Until that is done we wish our protest on record.

BY MR. NEVILLE PENROSE: These meetings have been going on on this question for well over a year. I am not in position to know who was advised and who was not advised. These meetings were handled very openly. If anybody had any objections, they were heard. Certainly not in my presence was anything passed over the objection of anyone in the meeting. If the El Paso Natural Gas desires to have an Executive meeting that will last an hour or two, to change this, it is going to be necessary to start where we were at the meeting at Fort Worth. These recommendations have been discussed with the engineers and attorneys, and have been more or less accepted. If they are changed drastically, we are going to have to have another meeting before we can do anything permanent in the matter.

BY MR. CRAGIN: I would like to have an expression from the Executive Committee as to whether our objections are fair. We think it is fair that we sit in on these discussions, and fair to the people of New Mexico. I am not criticizing. I am stating a

fact -- we were not notified. We have had a representative in every meeting we have been notified of. Those two meetings we were not notified.

BY MR. MCCORMICK: I don't understand why they did not receive notice.

It was mailed out of the Hobbs office to the address to which all schedules for the El Paso Natural Gas are made. I have not talked with Mr. Cragin. I understand they have something in mind in connection with paragraphs 21 and 22. It would be my suggestion that they offer here in evidence any changes or ideas they may have, if I am correct that they apply to these two items. We have had several meetings, and every operator in Lea County could have been there. It occurs to me that they could get relief under paragraphs 26 and 27.

BY MR. SETH: It seems to me essential, if they have anything they think is wrong, they ought to offer testimony to show in what manner it is wrong before the Commission.

BY GOVERNOR MILES: What is it they are objecting to?

BY MR. CRAGIN: We have nothing to conceal about our objection.

Some are important and some are unimportant. There is a provision that the specific gravity is assumed at .85. All the gas we handle is .65, which makes a great difference when you are calculating what passes there at .85, in a 24-hour period.

The objection we have to paragraph 21 is, we don't know what you mean by "reservoir". We feel our only recourse, as stated before, is recourse to an exemption, which means a duly advertised meeting with a date set. If passed on today, we would have to go to the federal court to protect our rights and the rights of our customers. It seems a fair thing to have us meet with the Executive Committee to compose our differences. I think it would save everybody time if we could get together with our attorney for half or three-quarters of an hour and then meet with the Executive Committee. If that is going to cause them to go back to the Fort Worth meeting, or another meeting, I think it is important enough to do that.

I think the reason we have not gotten the notices is that the El Paso Natural Gas is a member operator through the Western Gas, and we pay our share through the Western Gas, and we find that notices are being sent to the Western Gas Company and we never got them. I don't imply they have held meetings ignoring us, but we have been ignored inadvertently.

We are wholly sympathetic with what they are trying to do, and have cooperated.

BY MR. SETH: Couldn't the gentleman submit his objections by way of a written brief to the Commission?

BY GOVERNOR MILES: Would you submit a written brief?

BY MR. CRAGIN: Certainly, any way you want. I think the way I suggested would save time.

BY MR. WORDEN: This meeting is not ready to adjourn. Couldn't you consult your lawyer through the noon hour?

BY MR. CRAGIN: Yes, I would like a little time with him.

BY MR. WORDEN: If we adjourn until two o'clock would that give you time to consult him?

BY MR. CRAGIN: Could you make it two-thirty?

BY MR. WORDEN: I presume we could. There is another question before this Commission, an order affecting Eddy County. We could take that matter up, and come back to your problem.

BY MR. LIVINGSTON: If the Commission will permit me to say, the call for this meeting was to establish gas-oil ratios for the state as a whole. So far the Commission has heard from Lea County. There are other areas, Eddy County, and perhaps there may be operators from the Northwest here that have statements and testimony to offer to the Commission.

BY GOVERNOR MILES: The Commission has decided to adjourn until one-thirty, and at that time we will start on these other matters, and come back to this question later.

Whereupon the Commission recessed until 1:30 in the afternoon.

AFTERNOON SESSION

PRESENT:

Governor John E. Miles, Chairman of the Commission
Hon. Frank Worden, Commissioner of Public Lands, Secretary
Hon. A. Andreas, State Geologist, Member
Hon. Carl B. Livingston, Attorney for Commission.

The session was called to order by Governor Miles, who indicated the Commission was ready to hear from the Eddy County operators.

V. S. WELCH, Chairman, Eddy County Operators Committee:

Mr. Chairman: This order as written here, - where it is applicable to Lea County, it is not applicable to Eddy County, and we would -- as Chairman of the Eddy County operators, I would like to ask the Commission to extend the old order until such time as we can promulgate a new order that would fit our situation in Eddy County.

BY MR. LIVINGSTON: If the Commission is favorable to the suggestion, for the purpose of preserving the notice in this particular case, it will permit the continuance of the case until this order can be drawn.

BY MR. WELCH: If the Commission please, the Eddy County Operators, through Mr. Van Welch, has moved the Commission to continue this case, so far as Eddy County is concerned, until the Eddy County Operators can present a recommendation.

BY MR. LIVINGSTON: And the Commission has authorized me to state their ruling, which is that this case, in so far as Eddy County is concerned, is continued subject to the call of the Commission, for the purpose indicated in the motion of the Eddy County operators through Mr. Welch.

Whereupon, the representatives of the El Paso Natural Gas Company being present, the Commission reverted to the hearing in Lea County.

BY MR. CRAGIN: The El Paso Natural Gas Company states that they object to Paragraphs Nos. 21, 22 and 23, and state that particularly in the case of Paragraph No. 22, that we have properties totaling several thousand acres in the Langlie

area which, if that was enforced without exemptions, means we would be drained of the gas rights we have in this property, and we would not recover but a small fraction of the total recovery. And we, therefore, ask the Commission that it receive this protest and do not issue an order based on these recommendations until we have had a hearing, fixed by the Commission, to present to them the effect of drainage and confiscation of our property if we are not exempted.

BY MR. SETH: I understand you withdraw your objections to the provisions with respect to measuring gas?

BY MR. CRAGIN: Yes; and merely want time to present some exceptional cases in Lea County before the Commission issues an order; and there are two others who want to be in the same protest.

BY MR. MURRAY: You are hearing exceptions at this time?

BY GOVERNOR MILES: No, not exceptions. Mr. Cragin has asked for time to present his objections.

BY MR. MURRAY: We would like to ask that Sec. 33, T. 27, R. 37 be considered. That is now designated as an oil field. We would like to have that checked and see that it is designated as a gas reservoir without restriction.

BY MR. ANDREAS: Can't you put the history of that well before the Commission?

BY MR. MURRAY: We would like to. We would like to protest that no order be issued until such time as we can make that protest.

BY MR. H. S. COLE, of The Texas Company: We also have a number of exemptions we would like to have designated as gas reservoirs under Section 21. We would like to present that at the appropriate time.

BY MR. ANDREAS: We have been handling all requests for exemptions by having the company or operator submit in detail a cross section and history of the well. All exemptions, whether granted or not, are acted on by the Commission. We have to have that information to consider in detail before we can act. That applies to all operators in the southeast part of the state.

BY MR. ANDREAS: How long, Mr. Cragin, before you can get your information?

BY MR. CRAGIN: Three weeks at the outside. I said three weeks -- I want to be sure to have enough time, but if you left it open it would probably be less than two weeks. It is not only our own wells, but we have to get all the surrounding wells in the area, and it is not as simple as it seems.

BY MR. WORDEN: So far as the Commission is concerned, the 12th of August will be alright with us. Mr. Welch, do you think you could have your reports ready by that time for Eddy County?

BY MR. WELCH: That is a rather short time. Will it be necessary to have an open hearing?

BY MR. LIVINGSTON: Technically I think so, because the adoption of an order by the Commission must be based not only on recommendations, but there may be objections, and it would, therefore, be necessary to have an open and public hearing, and we should connect this hearing with that hearing so that we need not advertise the hearing.

BY MR. WELCH: Is August 12th the date?

BY MR. WORDEN: Yes.

BY MR. WELCH: I cannot be here on that date. However, will it be agreeable, if we do not have it ready by that time, that we have a little longer time?

BY MR. WORDEN: We are anxious to get this matter cleaned up. We want to get all matters in. If necessary we will set the date up a week or two weeks.

BY MR. WELCH: Could you do this? Could you make the temporary order a permanent order?

BY MR. LIVINGSTON: Mr. Welch, until the present order is changed, supplanted by another order, the present order can go on. It still goes on, although it is a temporary affair, until the Commission has adopted another order.

BY MR. WELCH: Could you adopt as a permanent order your temporary order now in effect? Of course it would have to be changed to apply to Eddy County.

BY MR. WORDEN: That is why we are giving you an extension of time, so that you can make the changes to make it apply to Eddy County.

BY MR. WELCH: Would it necessarily delay your issuing the order as to Lea County?

BY MR. LIVINGSTON: No, if the Commission adopted the temporary order as a permanent order a new case would have to be made. As I understand, the temporary order being carried on now is satisfactory to Eddy County until Eddy County has time to make recommendations and present them to the Commission.

BY MR. SETH: Couldn't we separate the two? It looks like Lea County -- some of the gentlemen want to know if there will be another hearing and if it is necessary for them to appear. I think you understand what the El Paso Natural Gas wants is to submit their exemptions. I suggest that for Lea County that date be fixed for the 12th of August.

BY MR. WORDEN: It is not our intention that they come back.

BY MR. SETH: So we understand Eddy County can take its course.

BY MR. WELCH: We will do all we can to get the information to you.

BY MR. LIVINGSTON: The Commission has authorized me to announce for the Commission that this case is continued to August 12th, 1940, at ten o'clock A. M., in Santa Fe.

C E R T I F I C A T E

I hereby certify that the foregoing and attached twenty-six and one-half pages of typewritten matter are a true, correct and complete transcript of the shorthand notes made by me on the 29th day of July, 1940, at the hearing before the Oil Conservation Commission in Case No. 21, and by me extended into typewriting.

Witness my hand this 5th day of August, 1940.

Esther Barton
Reporter.

CASE NO. 21.

THE ADOPTION OF A FINAL ORDER GOVERNING GAS-OIL RATIOS
IN THE VARIOUS PRODUCING FIELDS IN NEW MEXICO.

NAME	COMPANY	ADDRESS
Glenn Shuler	Texaco	Hobbs
P. H. Steyell	Culbertson & Brown & Steyell	
C. A. Curtis	Culbertson & Brown & Steyell	Jalisco, N.M.
Martin Yates III	Yates Oil Co.	
R. D. [unclear]	Rock Manufacturing Co.	
E. S. [unclear]	Flynn & [unclear]	
Henry [unclear]	Leonard Oil Company	Roswell
M. [unclear]	Shell Oil Co.	Houston Tex
H. J. Kemler	Shell Oil Co.	Midland Tex
A. E. Groff	Shell Oil Co.	Houston Tex
Ray [unclear]	oil conservation com	
H. B. [unclear]	The Texas Co.	Fr. Worth, Tex.
J. W. [unclear]	Humble	Midland Tex
[unclear]		
[unclear]		
[unclear]	North Shore Co.	Houston Tex
[unclear]	Shreve Oil Co.	Midland Tex
J. N. [unclear]	Shreve Oil Co.	Hobbs
[unclear]	El Paso Natl Gas	Jalisco
C. L. Perkins	El Paso Natl Gas	El Paso Tex
[unclear]	Barnes Oil Co.	Tulsa, Okla
[unclear]	Hunter Oil Co.	Roswell, N.M.
[unclear]	Westate Oil Co.	Jalisco, N.M.
[unclear]	Me-Tex	Hobbs N.M.
[unclear]	Ind. State Oil Co.	Dallas, Tex.
[unclear]	[unclear]	Midland Tex
R. S. Christie	Ameras Oil Co.	Fr. Worth, Tex.
[unclear]	Gulf Oil Corp.	Tulsa, Okla
[unclear]		
[unclear]		Roswell, N.M.
[unclear]	Great Western Prod.	Adrian, Tex

NAME	COMPANY	ADDRESS
N.B. Lash	Reps & Co	1111 N. Main
W. Chargin	El Paso Nat Gas Co	El Paso Texas
W. J. D. Smith	El Paso Natural Gas Co	El Paso, Texas
G. S. S. S. S.	-	Santa Fe N.M.
C. L. Sweeney	Indust.	Santa Fe N.M.
H. J. Sweeney	Continental Oil Co.	Fort Worth Texas
J. B. Sweeney	-	Fort Worth Texas
Wm. G. Sweeney	Wm. G. Sweeney Inc	Fort Worth
J. J. Sweeney	Independent	Lovington, New Mex.
J. W. Sweeney	Rowan Sweeney & Co	Fort Worth Texas
J. W. Sweeney	The Alliance Ref. Co.	Midland Tex
J. W. Sweeney	Standard Oil Co.	Fort Worth
J. H. Card	Standard Oil & Gas Co.	Fort Worth
W. S. Daniels	Phillips Petroleum Co.	Amorillo
D. R. McKeithan	Phillips Pet. Co.	Bartlesville, Okla.
J. S. S.	Standard	Santa Fe
A. M. C. Sweeney	Sea Corp Com	Fort Worth Texas
J. S. S.	Standard	Midland Tex
J. S. S.	Standard	Dallas Texas
D. D. S.	Cities Service Co.	Fort Worth

CASE NO. 21.

ORDER OF PROCEDURE TO CONSIDER THE
ADOPTION OF A FINAL ORDER GOVERNING
GAS-OIL RATIOS IN THE VARIOUS PRO-
DUCING FIELDS IN NEW MEXICO.

1. GOVERNOR MILES OPENS MEETING AND MAKES SUCH REMARKS AS HE DEEMS APPROPRIATE.
2. COMMISSIONER WORDEN ORDERS READING OF NOTICE OF HEARING.
3. WHEN READING OF NOTICE IS FINISHED, COMMISSIONER WORDEN ANNOUNCES THAT THE COMMISSION IS READY TO PROCEED.
4. COMMISSIONER WORDEN ANNOUNCES THAT HE WILL NOW SWEAR IN ANY WITNESSES TO BE OFFERED.
5. WHEN THE EVIDENCE AND ANY STATEMENTS MADE DURING THE PROCEEDINGS ARE CONCLUDED, COMMISSIONER WORDEN ANNOUNCES THAT SUCH WILL BE TAKEN UNDER ADVISEMENT BY THE COMMISSION.

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Pursuant to Chapter 72, Session Laws of 1935, State of New Mexico, by which Act the Oil Conservation Commission of New Mexico was created, investing said Commission with the jurisdiction and authority over all matters relating to the conservation of oil and gas in this State and of the enforcement of all provisions of said Act, notice is hereby given that a public hearing will be held at the Capitol, Santa Fe, New Mexico, on the 29th day of July, 1940, at ten o'clock A. M., for the purpose of considering the following:

Case No. 21.

The adoption of a final order governing gas-oil ratios in the various producing fields in New Mexico.

Any person having any interest in the subject of the said hearing shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on July 11, 1940.

OIL CONSERVATION COMMISSION

By John E. Miles
Governor

By Robert Worden
Commissioner of Public Lands

FILED
GAS OIL RATIO HEARING FOR
ADOPTION OF FINAL ORDER FOR EDDY
AND OTHER AREAS EXCEPT LEA 11-15-40

"Tuftear"

FILING FOLDERS

TO DUPLICATE THIS FOLDER ORDER

Globe-Wernicke

NO. 632

MADE IN U. S. A.

404

Case No.

Case 21-B File #1

Application, Transcript,
Small Exhibits, Etc.

NEW MEXICO STATE LAND OFFICE

COPY

November 25, 1940

AIRMAIL

Honorable Ernest A. Hanson
Supervisor, Oil & Gas Operations
U. S. Geological Survey
Department of the Interior
Roswell, New Mexico

My dear Mr. Hanson:

Enclosed please find copy of the notices for publication for the hearings set by the Oil Conservation Commission on the 11th and 12th of December.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:lk
Encls.

December 30, 1940

Mr. N. M. Baird
Republic Production Company
Artesia, New Mexico

Dear Mr. Baird:

Your letter of December 21 to Mr. Guy Shepard,
Secretary to Governor Miles, has been referred to
this Department for reply.

This Department does not have the transcripts
for distribution, but the practice is to order these
from the professional reporter who reported the cases.

The reporter is Miss Esther Barton, 1016 Don
Gaspar, Santa Fe, New Mexico.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:lk
cc - Miss Esther Barton
cc - Honorable Guy Shepard.

December 30, 1940

Honorable Ernest A. Hanson
Oil & Gas Supervisor
Department of the Interior
Roswell, New Mexico

Re: Cases Nos. 21-B, 22, 23, 24 and 25.

My dear Mr. Hanson:

Under separate cover you are being sent the transcripts in the hearings held recently in the above captioned cases.

With kindest personal regards,

Cordially yours,

Carl B. Livingston
Attorney

CBL:ik

November 27, 1940

Mr. Raymond F. Miller
Rm. 214, Ward Building
Artesia, New Mexico

Dear Mr. Miller:

Enclosed please find calendar giving
consecutive order of hearings set by the Commis-
sion. All interested parties are requested to
be ready.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 27, 1940

Honorable Roy Yarbrough
Oil & Gas Inspector
Oil Conservation Commission
Hobbs, New Mexico

Dear Mr. Yarbrough:

Enclosed please find calendar giving
consecutive order of hearings set by the Commis-
sion. All interested parties are requested to
be ready.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 27, 1940

Honorable Glenn Staley
Proration Umpire
Hobbs, New Mexico

My dear Glenn:

Enclosed please find calendar giving
consecutive order of hearings set by the Com-
mission. All interested parties are requested
to be ready.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 27, 1940

Honorable C. J. Dexter
C. J. Dexter Company
Artesia, New Mexico

My dear Mr. Dexter:

Enclosed please find calendar giving
consecutive order of hearings set by the Commis-
sion. All interested parties are requested to
be ready.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 27, 1940

Honorable Harry Leonard
Roswell, New Mexico

My dear Mr. Leonard:

Enclosed please find calendar giving
consecutive order of hearings set by the Commis-
sion. All interested parties are requested to
be ready.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 27, 1940

Honorable H. M. Dow
Attorney at Law
Roswell, New Mexico

My dear Hi:

Enclosed please find calendar giving
consecutive order of hearings set by the Commis-
sion. All interested parties are requested to
be ready.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Enc.

November 27, 1940

Honorable Van S. Welch
Chairman, Eddy County Operators
Artesia, New Mexico

My dear Mr. Welch:

Enclosed please find calendar giving
consecutive order of hearings set by the Commis-
sion. All interested parties are requested to
be ready.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

GBL:ik
Enc.

OIL CONSERVATION COMMISSION

November 25, 1940

C
O
P
Y

Honorable C. J. Dexter
C. J. Dexter Company
Artesia, New Mexico

My dear Mr. Dexter:

Enclosed please find copy of the notices for publication for the hearings set by the Oil Conservation Commission on the 11th and 12th of December.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Encls.

NEW MEXICO STATE LAND OFFICE

COPY

November 25, 1940

Honorable Harry Leonard
Roswell, New Mexico

My dear Mr. Leonard:

Enclosed please find copy of the notices for publication for the hearings set by the Oil Conservation Commission on the 11th and 12th of December.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

GBL:ik
Encls.

COPY

November 29, 1940

AIRMAIL

Honorable Glenn Staley
Proration Empire
Hobbs, New Mexico

My dear Mr. Staley:

Enclosed please find copy of the notices for publication for the hearings set by the Oil Conservation Commission on the 11th and 12th of December.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Encls.

NEW MEXICO STATE LAND OFFICE

COPY

November 25, 1940

Honorable Emery Carper
Artesia, New Mexico

My dear Mr. Carper:

Enclosed please find copy of the notices for publication for the hearings set by the Oil Conservation Commission on the 11th and 12th of December.

Very truly yours,

OIL CONSERVATION COMMISSION

By Carl B. Livingston
Attorney

CBL:ik
Encls.

CASE NO. 21-B

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

THE ADOPTION OF A FINAL GAS-OIL RATIO ORDER FOR
THE PRODUCING FIELDS IN EDDY COUNTY AND OTHER AREAS
IN NEW MEXICO EXCEPT LEA COUNTY, RECESSED IN CASE
NO. 21 FROM THE HEARING OF AUGUST 29, 1940, TO
NOVEMBER 15, 1940, AND NOT HEARD AT SAID LATTER DATE.

TRANSCRIPT OF PROCEEDINGS AT HEARING IN
THE CAPITOL BUILDING
SANTA FE, NEW MEXICO
DECEMBER 12, 1940

Pursuant to order of the Commission, duly made and entered,
setting December 12, 1940, at two o'clock P. M. for hearing in the above
entitled matter, said hearing was convened at two o'clock P. M. of December
12, 1940, in the Capitol Building, Santa Fe, New Mexico, the Commission
sitting as follows:

HON. FRANK WORDEN, Commissioner of Public Lands, Secretary.
HON. A. ANDREAS, State Geologist, Member
HON. CARL B. LIVINGSTON, Attorney for the Commission

APPEARANCES:

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
C. A. Daniels	Phillips Pet. Co.	Amarillo, Texas
D. R. McKeithan	" " "	Bartlesville, Okla.
G. A. Card	Stanolind O. & G. Co.	Ft. Worth, Texas
J. S. Griffith	Humble Oil & R. Co.	Roswell, N. M.
Glenn Staley	Hobbs Proration Office	Hobbs, N. M.
Edgar Kraus	Atlantic Rfg. Co.	Carlsbad, N. M.

The hearing was called to order by Mr. Frank Worden, who thereupon
requested Mr. Livingston to read the call of the hearing, as follows:

"NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The Oil Conservation Commission, by law invested with jurisdiction
as the oil and gas regulatory body of the State of New Mexico, hereby
gives notice of the following public hearing to be held at the Capitol,
Santa Fe, New Mexico:

Case No. 21-B (Gas-Oil Ratio).

The adoption of a final gas-oil ratio order for the pro-
ducing fields in Eddy County and other areas in New Mexico
except Lea County, recessed in Case No. 21 from the hearing
of August 29, 1940, to November 15, 1940, and not heard at
said latter date, is now set for hearing on December 12, 1940,
at 2:00 P. M.

Any person having any interest in the subject of the said hearings

shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 25, 1940."

BY MR. LIVINGSTON: If the Commission please, with the Commission's leave, it is desired to offer in evidence at this time the transcript of the testimony taken before the Commission in Gas-Oil Ratio hearings, Case No. 21, of July 29, 1940, August 12, 1940 and August 29, 1940.

BY MR. WORDEN: Is there any objection? If not, the testimony so offered will be admitted in evidence.

BY MR. GLENN STALEY: Mr. Chairman, the Eddy County Operators have asked that I ask the Commission to make the temporary order permanent in regard to the gas-oil setup for each pool in Eddy County.

BY MR. LIVINGSTON: Do you mean Orders Nos. 250 and 259?

BY MR. STALEY: Yes, the orders now in effect.

BY MR. WORDEN: If that is what is desired, the Commission will simply take those orders and write them into one order.

Is there anybody present who has anything to offer, or any suggestion to make to the Commission with reference to this Eddy County matter?

(No answer).

Hearing none, I take it there are no objections, and the case will be closed.

C E R T I F I C A T E

I hereby certify that the attached and foregoing one and one-half pages of typewritten matter are a true, correct and complete transcript of the shorthand notes taken by me in Case No. 21*B before the Oil Conservation Commission on the 12th day of December, 1940, and by me extended into type-writing.

Witness my hand this 23rd day of December, 1940.

Esther Barton

Case #21-B.

2:00 P. M., December 12, 1940.

Adoption of final gas-oil ratio order for producing fields in Eddy County and other areas in New Mexico except Lea County.

<u>Name</u>	<u>Company</u>	<u>Address</u>
C. A. Daniels	Phillips Petroleum Co.	Amarillo, Tex.
D. R. McKeithan		Bartlesville, Okla.
M. A. Card	Standard Oil Co.	Ft. Worth,
J. S. Briggs	Idemco Oil Co.	Roseville
Wm. Slater	Idemco Oil Co.	McAlester, Okla.
Edgar Evans	Atlantic Ref. Co.	Calderwood, Tex.

MR. LIVINGSTON: It is desired to offer in evidence at this time the transcripts of the testimony taken before the Commission in Gas-Oil Ratio hearings, Case No. 21, of July 29, 1940, August 12, 1940, and August 29, 1940.

MR. WORDEN: Is there any objection? If not, the testimony so offered is admitted into evidence.

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The Oil Conservation Commission, by law invested with jurisdiction as the oil and gas regulatory body of the State of New Mexico, hereby gives notice of the following public hearings to be held at the Capitol, Santa Fe, New Mexico:

Case No. 23.

The petition of the Operators' Committee for the operators in the Loco Hills Pool in Eddy County, in connection with the proposal of a collective pressure maintenance program for said Pool, for an order from the Commission permitting a ten percent increase over and above the normal allowable for each month until the principal investment in said pressure maintenance program has been amortized; the production of the monthly allowable of wells selected as input wells from another well or wells owned by the operator, preferably on the same basic lease, in order to preclude the penalizing of operators whose wells are used as input wells -- with special reference to the following wells proposed to be so used: R. W. Fair-Brainard #6, and Bassett & Birney #6B-State. This case is set for 2:00 P. M., December 11, 1940.

Case No. 24.

The petition of R. W. Fair, Art Aston, Charles A. Scheurich, Carl A. Hatch, J. R. Cole, Sidney Johnson and Anna Franklin, for a location for a well for oil and gas in the northwest corner of the NE1/4, Section 32, T. 17 S., R. 30 E., (Loco Hills), for structural reasons, at a point closer to the boundary line of said 40-acre tract than is permitted by present rules of the Commission. This case is set for 9:00 A. M., December 12, 1940.

Case No. 21-B (Gas-Oil Ratio).

✓ The adoption of a final gas-oil ratio order for the producing fields in Eddy County and other areas in New Mexico except Lea County, recessed in Case No. 21 from the hearing of August 29, 1940, to November 15, 1940, and not heard at said latter date, is now set for hearing on December 12, 1940, at 2:00 P. M.

Any person having any interest in the subject of the said hearings shall be entitled to be heard.

Given under the seal of said Commission at Santa Fe, New Mexico, on November 25, 1940.

OIL CONSERVATION COMMISSION

By (Sgd.) FRANK WORDEN
Commissioner of Public Lands

By (Sgd.) A. ANDREAS
State Geologist

copy 7 (SEAL)
Publication
in Case #23.

CALENDAR OF SETTING OF HEARINGS BEFORE
THE NEW MEXICO OIL CONSERVATION COMMISSION
AT SANTA FE, NEW MEXICO, DURING
DECEMBER 11 and 12, 1940.

CASE NO. 22, set for hearing 9:00 A. M., December 11, 1940, upon the petition of Anderson-Prichard Oil Corporation and Stanolind Oil & Gas Company, for themselves and for other operators in that part of the Langlie Pool, Lea County, lying generally in Sections 4, 5, 8 and 9, T. 25 S., R. 37 E., N.M.P.M., for an order by the Commission regarding the unitization, repressuring, or other conservation measures as to that portion of said Pool in order to increase the ultimate recovery therefrom.

CASE NO. 23, set for hearing 2:00 P. M., December 11, 1940, upon the petition of the Operators' Committee for the operators in the Loco Hills Pool in Eddy County, in connection with the proposal of a collective pressure maintenance program for said Pool, for an order from the Commission permitting a ten percent increase over and above the normal allowable for each month until the principal investment in said pressure maintenance program has been amortized; the production of the monthly allowable of wells selected as input wells from another well or wells owned by the operator, preferably on the same basic lease, in order to preclude the penalizing of operators whose wells are used as input wells -- with special reference to the following wells proposed to be so used: R. W. Fair-Brainard #6, and Bassott & Sirney #6B-State.

CASE NO. 24, set for hearing 9:00 A. M., December 12, 1940, upon the petition of R. W. Fair, Bert Aston, Charles A. Scheurich, Carl A. Hatch, J. R. Cole, Sidney Johnson and Anna Franklin, for a location for a well for oil and gas in the northwest corner of the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 32, T. 17 S., R. 30 E., (Loco Hills), for structural reasons, at a point closer to the boundary line of said 40-acre tract than is permitted by present rules of the Commission.

CASE NO. 25, set for hearing 10:00 A. M., December 12, 1940, upon the petition of Frank B. Hadlock for a well location in the NE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 16, T. 20 S., R. 32 E. (Halfway Pool), for structural reasons, closer to the exterior unit boundary than is conformable to existing rules of the Commission.

CASE No. 21-B, set for hearing 2:00 P. M., December 12, 1940, upon the adoption of a final gas-oil ratio order for the producing fields in Eddy County and other areas in New Mexico except Lea County, recessed in Case No. 21 from the hearing of August 29, 1940, to November 15, 1940, and not heard at said latter date.

* * * * *

FILE 2

COLL RATIO RECESSED HEARING
ADOPTION OF FINAL ORDER
AUGUST 12-1940

"Tuftear"

FILING FOLDERS

TO DUPLICATE THIS FOLDER ORDER

Globe-Wernicke

NO. 632

MADE IN U. S. A.

Case No.

2/ File #2

Application, Transcript,
Small Exhibits, Etc.

OIL CONSERVATION COMMISSION

August 12, 1940

C
O
P
Y

Mr. V. S. Welch, Chairman
Eddy County Operators Committee
Artesia, New Mexico

Re: Case No. 21, the adoption of a final
order governing gas-oil ratios in the
various producing fields in New Mexico.

My dear Van:

Reference is made to your letter of August 10.

The Commission continued the hearing in the
above captioned gas-oil ratio case to August 29th.
If the Eddy County Operators need more time, let it
be known to the Commission.

Very truly yours,

OIL CONSERVATION COMMISSION

By _____
Carl B. Livingston
Attorney

CBL:ik
cc - Honorable John E. Miles
Governor of New Mexico
Santa Fe, New Mexico

W. S. Welch
Oil Producer and Operator
Artesia, N. M.

August 10th. 1940

Honorable John E. Miles, Governor
Chairman New Mexico Oil Conservation Commission ✓
Santa Fe, New Mexico

Dear Governor Miles;

As Chairman of the Eddy County Operators Committee, I hereby respectfully request that the Oil Conservation Commission of the State of New Mexico at its hearing August 12th., continue Case# 21 as it applies to Eddy County until such time as proper tests and data can be procured and I further request that the present Order # 250 as modified by Order # 259 be kept in force as applying to Eddy County.

Very respectfully yours

W. S. Welch

W. S. Welch
Chairman of Eddy County
Operators Committee.

CASE NO. 21.

BEFORE THE OIL CONSERVATION COMMISSION
FOR THE STATE OF NEW MEXICO

RECESSED HEARING RELATIVE TO
ADOPTING A FINAL ORDER GOVERNING
GAS-OIL RATIOS IN THE VARIOUS PRO-
DUCING FIELDS IN NEW MEXICO

THE CAPITOL, SANTA FE, NEW MEXICO
AUGUST 12, 1940.

Pursuant to recess taken on July 29, 1940, hearing in
the above entitled matter was resumed in the Governor's Office,
Capitol Building, Santa Fe, New Mexico, at the hour of ten o'clock
A. M. of August 12, 1940, the Commission sitting as follows:

Hon. John E. Miles, Governor, Chairman of Commission
Hon. Frank Worden, Commissioner of Public Lands, Secretary
Hon. A. Andreas, State Geologist, Member
Hon. Carl B. Livingston, Attorney for Commission.

APPEARANCES:

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
Glenn Staley	Lea County Operators	Hobbs, New Mexico
H. L. Johnston	Continental Oil Co.	" " "
Ed Keeler	" " "	" " "
R. G. Schuehle	Shell Oil Co.	Midland, Texas
J. O. Seth	Stanolind	Santa Fe, New Mexico

The hearing was called to order by Governor Miles, who
announced that the Commission was ready to hear from those present.

BY MR. SETH: I think, if the Commission please, there has been
some request for a postponement, and I think the only thing
before the Commission is to agree on a satisfactory date.

Whereupon, after discussion, it was agreed that this
hearing be recessed until the 29th day of August, 1940

BY MR. WORDEN: What about the El Paso Natural Gas?

BY MR. STALEY: They are getting along pretty well with their work,
and were gathering a bunch of engineering data.

BY MR. WORDEN: Another thing,- what position is Eddy County going
to be in? Are they going to have to make a bottom hole pressure
survey?

BY MR. JOHNSTON: I don't want to speak for Eddy County operators,
but I am a little doubtful if they will have the information

they feel they will need to make their recommendations at that time. I do know the Eddy County operators are very much concerned as to the order that will be issued regulating the ratios for that County; and just how soon they will be able to submit recommendations -- they may be able on the 29th to submit recommendations so far as wells in Eddy County are concerned. The Continental Oil Company has very few wells. On our wells we do have the bottom hole pressure survey made, along with the gas-oil ratio tests. I think they do feel they should go a head and get the feeling of the operators on a regular routine basis.

BY MR. SETH: There is no reason for holding up the Lea County order.

BY MR. JOHNSTON: We have no objection to having the order issued as recommended for Lea County.

BY MR. LIVINGSTON: As to Eddy County, the whole matter could be continued to one date, and if Eddy County needs more time, it could be continued again when the Commission meets.

BY MR. JOHNSTON: I believe that if the pipe line situation is cleared up in Eddy County where we have adequate gathering systems, I believe it will be possible to operate all wells on a routine basis, and that matter may be cleared up by the 29th, but we do not know whether the pipe line company will be able to relieve the situation. The pipe line company has, I understand, indicated a willingness to revamp their gathering system and setup in such a way that the operators will not be handicapped.

BY MR. ANDREAS: I understand they agreed to do that.

BY MR. JOHNSTON: They have indicated their willingness. We hope they will. That is something that has to be done before you can make a good accurate survey on that territory.

BY GOVERNOR MILES: If there is any doubt about this going to be enough time --

BY MR. SETH: I think Lea County can be disposed of, and there is no serious waste of gas in Eddy County.

BY MR. JOHNSTON: Eddy County does have some problems peculiar to that county, and would have to have consideration from the

standpoint of the pool or field, definitely apart from Lea County.

BY GOVERNOR MILES: Where does the Natural Gas get their gas?

BY MR. SETH: Lea, except the gas furnished to Roswell -- those are gas wells.

BY MR. ANDREAS: If they have some individual problems, we could accept or reject the recommendations to make it apply to Lea County only, rather than the whole state. That would clear up the Lea County situation, and give Eddy County plenty of time to present their suggestions.

BY MR. JOHNSTON: I think that is alright.

Whereupon, there being no further business to come before the Commission, this hearing was recessed until ten o'clock A. M. of August 29, 1940.

C E R T I F I C A T E

I hereby certify that the foregoing and attached two and one-half pages of typewritten matter are a true, correct and complete transcript of the shorthand notes made by me on the 12th day of August, 1940, at the recessed hearing before the Oil Conservation Commission in Case No. 21, and by me extended into typewriting.

Witness my hand this 14th day of August, 1940.

Esther Barton

CASE NO. 21 - CONTINUED TO AUGUST 12, 1940.

ORDER OF PROCEDURE TO CONSIDER THE
ADOPTION OF A FINAL ORDER GOVERNING
GAS-OIL RATIOS IN THE VARIOUS PRO-
DUCING FIELDS IN NEW MEXICO.

1. GOVERNOR MILES OPENS MEETING AND MAKES SUCH REMARKS AS HE DEEMS APPROPRIATE.
2. COMMISSIONER WORDEN ANNOUNCES, "THIS CASE WAS CONTINUED TO THIS DATE, AND THE COMMISSION IS READY TO PROCEED," AND ASKS, "WHAT IS YOUR GENTLEMEN'S PLEASURE?" (HERE, IF THERE IS A MOTION OR REQUEST TO CONTINUE THE HEARING TO A SPECIFIC DATE, SUCH MAY BE RECEIVED AND ACTED UPON BY THE COMMISSION -- THE RECORD BEING MADE TO SHOW THE COMMISSION'S ACTION).

CASE NO. 21.

(RECESSED HEARING ON AUGUST 12, 1940)

IN THE MATTER OF ADOPTION OF A FINAL ORDER GOVERNING GAS-OIL
RATIOS IN THE VARIOUS PRODUCING FIELDS IN NEW MEXICO.

NAME

COMPANY

ADDRESS

Glenn Staley
H. J. Moton
Ed. Keelge
C. Schuehle
Albert

Tex. County operators H. J. Moton
Continental and Co. Dallas

Shell Oil Co. Mesquite Ref.
Owens

FILED
GAS OIL RATIO RECESSED HEARING
ADOPTION OF FINAL ORDER
AUGUST 29-1940

"Tuftear"

FILING FOLDERS

TO DUPLICATE THIS FOLDER ORDER

Globe-Wernicke

NO. 632

MADE IN U. S. A.

404

Case No.

21 File # 3

Application, Transcript,
Small Exhibits, Etc.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 997
Roswell, New Mexico
December 17, 1940

Mr. Carl B. Livingston
Oil Conservation Commission
Santa Fe, New Mexico

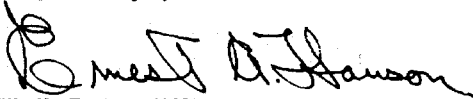
RE: Case 21, Recessed Hearing of
Aug. 29, 1940, relative to adopting
final order governing Gas-Oil Ratios
in various producing fields in N. M.

Dear Carl:

The transcript in the above-captioned hearing has been received, and we appreciate very much your sending it to us. We shall be glad to receive the balance of the transcripts of matters heard before the Commission on December 11 and 12.

Regards, and best wishes for the holidays and the New Year.

Very truly yours



ERNEST A. HANSON
Supervisor, Oil and Gas Operations.

EBA

OIL CONSERVATION COMMISSION

December 12, 1940

C
D
Y
Honorable Ernest A. Hanson
Oil & Gas Supervisor
U. S. Geological Survey
Roswell, New Mexico

Re: Case No. 21, recessed hearing of
August 29, 1940, relative to adopting
final order governing Gas-Oil Ratios
in the various producing fields in
New Mexico.

My dear Ernest:

In some way, I overlooked sending you the
transcript in the above captioned hearing. En-
closed you will find such transcript.

You will receive transcripts in all of the
matters heard before the Commission on December
11th and 12th - five cases. The Reporter is
going to prepare these as rapidly as possible.

It was good to see you here in Santa Fe and
looking so fine.

Please give my kindest personal regards to
Mr. Arnold.

Cordially,

Your friend,

Carl B. Livingston
Attorney

CBL:ik

HUMBLE OIL & REFINING COMPANY

MIDLAND, TEXAS

J. W. HOUSE

September 24, 1940



Conservation Commission of New Mexico,
Sante Fe, New Mexico.

Gentlemen:

In view of your expressed willingness to receive suggestions relative to the simplification of the present temporary gas-oil ratio regulations, I am taking the liberty to suggest that in any permanent gas-oil ratios regulations, the correction for Boyles law and the correction for the amount of dissolved gas not liberated from the oil when separator pressures are in excess of 100 pounds per square inch may be eliminated without creating an excessive error. That is, the variation is no greater than may be anticipated in the customary methods used in measuring gas for gas-oil ratio purposes. As the present number of wells to which such corrections might be applicable are very limited and form a rather insignificant percentage of the total number of wells in Lea County, the refinement of gas measurement suggested by the retention of the corrections for Boyles law and dissolved gas not liberated from the oil does not seem warranted at this time.

Very truly yours,

J. W. HOUSE,

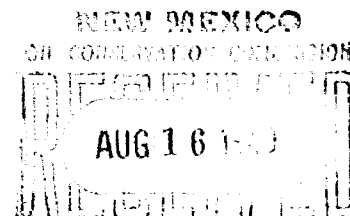
BY

R. S. Dewey
R. S. Dewey

RSD:dhv

cc Mr. C. G. Staley
Mr. C. E. Reistle, Jr.,
Mr. W. E. Hubbard

August 14, 1940



Mr. C.J. Dexter,
Secretary Eddy County Operators Committee,
Artesia, N.M.

Dear Sir:

At the conclusion of the gas-oil ratio hearing before the Oil Conservation Commission in Santa Fe July 29 the meeting was recessed until 10 A.M. August 12. At the request of several companies this recess was further extended until 10 A.M. Thursday, August 29.

The Oil Conservation Commission stated that should the Eddy County operators require more time in which to gather bottom hole pressure and other data prior to the issuance of a permanent gas-oil ratio order for Eddy County, that the recess would be extended beyond August 29, in so far as it pertains to Eddy County matters.

Yours very truly,

GS:M

Glenn Staley

cc: A.M. McCorkle
P.O. North, Texas

Oil Conservation Commission
Santa Fe, N.M.

Same letter sent to: Van Welch - Chairman Eddy County Operators Comm.
F. Brainard - Sec. Loco Hills Operators Comm.
E. Carper - Chairman Loco Hills Operators Comm.
B. Aston - Chairman Loco Hills Executive Comm.

CLASS OF SERVICE
This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

1220

SYMBOLS
DL - Day Letter
NL - Night Letter
LC - Deferred Cable
NLT - Cable Night Letter
Ship Radiogram

R. B. WHITE
PRESIDENT

NEWCOMB CARLTON
CHAIRMAN OF THE BOARD

J. C. WILLEVER
FIRST VICE-PRESIDENT

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

Received at

7H304 89 HT=DALLAS TEX 20

1940 AUG 28 PM 9 22

GOV JOHN E. MILES

GOVERNOR

IF EXCEPTIONS REQUESTS WILL BE HEARD TO THE GAS-OIL RATIO ORDER BEING CONSIDERED AT HEARING AUGUST 29 SUN OIL COMPANY WISHES TO INTRODUCE FROM YOUR FILES ITS LETTER OF JUNE 27 1940, HAVING TO DO WITH WELLS ON ITS L R STUART LEASE LAMBLE FIELD STOP THIS REQUEST IS THAT OUR WELLS BE NOT PENALIZED IN ALLOWABLE IF SPECIFIED OFFSET WELLS ARE EXEMPTED FROM PENALTY STOP IF NO EXCEPTIONS ARE GRANTED TO OFFSETTING WELLS SUN OIL COMPANY DOES NOT REQUEST THAT ITS WELLS BE EXEMPTED FROM YOUR ORDERS.

W E HEATH SUN OIL COMPANY.

Shaw W. M. W. W. W.

29 27 1940.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

2

COPY OF PROPOSED LEA COUNTY ORDER GIVEN
TO MR. LIVINGSTON 1/21/41 TO TAKE TO MEETING
IN ROSWELL.

*This proposed order was read
into testimony at hearing held
July 29, 1940.*

CASE NO. 21 - CONTINUED TO AUGUST 29, 1940.

ORDER OF PROCEDURE TO CONSIDER THE
ADOPTION OF A FINAL ORDER GOVERNING
GAS-OIL RATIOS IN THE VARIOUS PRO-
DUCING FIELDS IN NEW MEXICO.

1. GOVERNOR MILES OPENS MEETING AND MAKES SUCH REMARKS
AS HE DEEMS APPROPRIATE.
2. COMMISSIONER WORDEN ANNOUNCES, "THIS CASE WAS CON-
TINUED TO THIS DATE, AND THE COMMISSION IS READY TO
PROCEED," AND ASKS, "WHAT IS YOUR GENTLEMEN'S PLEASURE?"
(AT THIS POINT ANNOUNCEMENT SHOULD BE MADE THAT THE
OPERATORS IN LEA COUNTY WILL NOW BE HEARD AND AT THE
END OF THE HEARING FOR LEA COUNTY THE OPERATORS OF
EDDY COUNTY WILL BE HEARD AND THOSE FROM ANY OTHER
PRODUCING AREA IN THIS STATE).

CASE NO. 21

BEFORE THE OIL CONSERVATION COMMISSION
FOR THE STATE OF NEW MEXICO

RECESSED HEARING RELATIVE TO ADOPTING
A FINAL ORDER GOVERNING GAS-OIL RATIOS
IN THE VARIOUS PRODUCING FIELDS IN
NEW MEXICO

THE CAPITOL, SANTA FE, NEW MEXICO,
AUGUST 29, 1940

Pursuant to recess taken on August 12, 1940, hearing
in the above entitled matter was resumed in the Hall of the
House of Representatives, Capitol Building, Santa Fe, New Mexico,
at the hour of ten o'clock A. M. of August 29, 1940, the
Commission sitting as follows:

Hon. Frank Worden, Commissioner of Public Lands, Secretary
Hon. A. Andreas, State Geologist, Member
Hon. Carl B. Livingston, Attorney for Commission.

APPEARANCES:

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
Harry Leonard	Leonard Oil Co.	Roswell, New Mexico
W. E. Hubbard	Humble Oil Co.	Houston, Texas
R. S. Dewey	" " "	Midland, Texas
J. O. Seth	Stanolind O. & G. Co.	Santa Fe, New Mexico
G. H. Card	" " " " "	Fort Worth, Texas
E. L. Griffith	Atlantic Rfg. Co.	Odessa, Texas
Edgar Kraus	" " "	Carlsbad, New Mexico
D. R. McKeithan	Phillips Pet. Co.	Bartlesville, Okla.
C. A. Daniels	" " "	Amarillo, Texas
A. E. Willig	The Texas Co.	Fort Worth, Texas
H. L. Cole, Jr.	" " "	" " "
Glenn Staley	Lea County Operators	Hobbs, New Mexico
F. W. Brigrance	Rowan Drilling Co.	Fort Worth, Texas
R. G. Schuehle	Shell Oil Co.	Midland, Texas
W. K. Davis	El Paso Natural Gas	Jal, New Mexico
Floyd Brett	Repollo Oil Co.	Hobbs, New Mexico
J. B. Kennedy	" " "	Midland, Texas
R. C. DeWoody	Great Western Prod. Inc.	Odessa, Texas
George P. Livermore	" " " "	Odessa, Texas
S. P. Hannifin	Magnolia	Roswell, New Mexico
Ed Downing	"	Kermit, Texas
E. W. Childers	Tide Water Assoc.	Midland, Texas
C. C. Cragin	El Paso Natural Gas Co.	El Paso, Texas
O. B. Hedrick	Texas Pacific Coal & Oil	Midland, Texas
H. L. Johnston	Continental Oil Co.	Hobbs, New Mexico
E. C. Arnold	U.S.C.S.	Roswell, New Mexico
J. N. Dunlavey	Skelly Oil Co.	Hobbs, New Mexico
Colin C. Rae	" " "	Tulsa, Oklahoma
Lloyd L. Gray	Gulf Oil Corp.	Tulsa, Oklahoma
R. S. Christie	Amerada Pet. Corp.	Fort Worth, Texas

The hearing was called to order by Mr. Norden, who announced that the Governor being absent, the meeting would proceed without him, and that the Commission was ready to hear from those present.

BY MR. LIVINGSTON: As you all know, this meeting was continued on the 12th of August to the 29th of this month, and in order to clarify the purpose of this hearing, and in order to proceed, permit me to announce this is a continuation of the hearing held on the 12th of August for the purpose of adopting a final gas-oil ratio order for the various fields in the state.

At the last meeting it developed that not all of the areas wanted the same kind of order; apparently Lea County wanted one, Eddy County another; so, therefore, the procedure should be as follows:

Lea County should be heard first as to any testimony or suggested changes in the proposed order pending before the Commission. After Lea County is heard, then anything Eddy County has to offer in the way of testimony or suggestions, should be presented to the Commission; and anything from any other part of the state should then be presented.

Now, if there is any testimony to be presented in behalf of Lea County, please present it and let Mr. Norden swear in the witnesses. To save unduly lengthening the record, this proposed order is already in the record. Any exceptions or suggestions should be offered, but the proposed order itself is already in the record.

BY MR. C. C. CRAGEN: I would like to have the record show that the El Paso Natural Gas Company has filed five copies of a report supporting our request for certain exemptions from the existing temporary order, if it is made permanent, and from this recommended order, if it is adopted.

BY MR. SEEL: Stanolind has filed a request for the exemption of five wells producing gas, the gas from which is being sold

to Mr. Gargin's company, requesting that they be exempted from the temporary order and this order. We wish to have that made a part of the record, so that if any rule is adopted as to advertising, these exemptions may be granted. In that connection, I would like to suggest to the Commission the possibility that the rule should be modified to some extent so that a hearing could be ordered whenever the Commission thought it necessary; to have a hearing on each exemption would require a lot of time and expense of advertising, and some method could be worked out so that the Commission could order a hearing whenever it was thought necessary.

LLOYD L. GRAY.

being sworn to tell the truth, the whole truth and nothing but the truth, offered the following testimony on behalf of the Gulf Oil Corporation:

BE MR. GRAY: I think I agree with what Judge Seth just stated with reference to Paragraph 26, and I have a statement I would like to read into the record:

BEFORE THE OIL CONSERVATION COMMISSION
IN THE MATTER OF CASE 21
REGARDING THE ESTABLISHMENT OF MAXIMUM GAS-OIL RATIOS AND
THE CONTROL OF PRODUCTION OF GAS FROM THE VARIOUS
POOLS IN THE STATE OF NEW MEXICO

Statement of the Gulf Oil Corporation

The Gulf Oil Corporation urges that the proposed gas-oil ratio order as read into the record by R. S. Schuehle at the hearing held on July 29, 1940, be accepted without change and approved by the Commission as soon as possible. It is also urged that no blanket exception or exemption be allowed since there is danger that such action would nullify all of the conservation measures provided in the proposed order. Likewise there is danger that such blanket exception or exemption would nullify all of the remedial and conservation work which the operators of oil properties have so heartily cooperated in performing at great expense. This would be waste in every sense of the word and would cause irrecoverable

loss of oil underground.

It is recommended that exemption be granted to individual wells or properties only, after the owner has submitted to the Commission adequate proof that the well or property is producing from a predominantly gas-bearing reservoir or that it is subject to paragraph 27 of the proposed order.

It is recognized that the El Paso Natural Gas Company is faced with a serious situation in that it is connected to wells having a potential capacity of many times the available market, but that the proposed order if applied before designating that certain reservoirs are predominantly gas bearing, would reduce the available gas to approximately one-fourth of the El Paso's requirements. To remedy this situation it is recommended that concurrently with the promulgation of the gas-oil ratio order a temporary order be made designating the following areas as predominantly gas bearing:" (At this point

Mr. Gray displayed a map and made the following statement:)

The area south and west of that red line (indicating on map, which was displayed but not offered in evidence) is the area I will describe. According to the best information I have, the forty acres in yellow are connected at the present time with the El Paso Natural Gas, so that they are high pressure wells.

"All of Township 26 South, Range 37 East; all of Township 26 South, Range 36 East; all of Township 25 South, Range 36 East, except the north tier of sections; the west half of west half of Sections 7 and 18; all of Section 19; the west half of Section 20; all of Sections 28, 29, 30, 31, 32 and 33, Township 25 South, Range 37 East. It is believed that most engineers and geologists agree that the area described is predominantly gas bearing, and since during the year 1939 slightly in excess of 30% of El Paso Natural Gas Company's takes were from that area, it should satisfy El Paso's objection and make available to it a sufficient supply of gas. In recommending that the above described area be temporarily

designated as predominantly gas bearing, it is not intended that it be temporary to the extent that it would need to be renewed from proration period to proration period, but should remain in force only until an investigative body can pass upon and present evidence to the Commission as to which reservoirs should be designated as predominantly gas bearing.

The foregoing has to do with the control of gas production and gas-oil ratios in oil reservoirs. Another somewhat related subject, the control of the production of natural gas from gas reservoirs, also demands attention. For several years there has grown up the practice of unequal gas withdrawals from certain wells in the southern portion of Lea County. The practice has been discriminatory, inequitable and conducive to underground waste. In addition, the potential capacity of natural gas wells in that area, namely, the Lynn, Cooper, Jal, Eaves, Rhodes, Langlie, Mattix and Skelly pools is many times the available gas market. For these reasons it is recommended that as soon as practicable a hearing be called for the purpose of receiving evidence regarding a proratio plan for natural gas in those pools. This is in accordance with the first paragraph of Section 10, Chapter 72 of the Session Laws of New Mexico, 1935, in which it is provided that, 'Included in the power given to the commission is the authority: to collect data; to make investigations and inspections; to examine properties, leases, papers, books and records; to examine, check, test and gauge oil and gas wells, and tanks, plants, refineries, and all means and modes of transportation and equipment; to hold hearings; to provide for the keeping of records and the making of reports, and for the checking of the accuracy thereof; to limit and prorate production of crude petroleum oil and natural gas; to require either generally or in particular areas certificates of clearance or tenders in connection with the transportation of crude petroleum oil or any products thereof, or both such oil and products.'

It is recommended that no changes be made in the wording

of Paragraph 22 which would change the meaning of that paragraph as read into the record by Mr. Schuele. This paragraph which controls the amount of gas which may be produced from gas wells in a reservoir not designated as predominantly gas-bearing, might be termed the most important from the standpoint of conservation of any paragraph in the recommended order. All the conservation effected by all of the other paragraphs could be entirely dissipated if the provisions of Paragraph 22 were not included. It is quite obvious that the savings of gas and reservoir energy made possible by extensive remedial work might easily be lost and vast quantities of oil might be forever trapped within the reservoir if wells producing gas only from that reservoir are allowed to produce without restriction.

Since no reference was made in the call of the hearing to changing the size of units producing gas only from an oil reservoir, it is assumed that no evidence will be received on this subject. Insofar as the size of the unit in reservoirs predominantly oil bearing is concerned, it is believed that the hearings conducted during 1935 & 1936 included adequate evidence on the subject and that 40 acres is adequate and proper, whether the well produce oil or be a gas well in an oil reservoir. With reference to the size of the unit in areas designated as predominantly gas bearing, it is recommended that this subject be included in the Call for the hearing with reference to the proration of natural gas.

Respectfully submitted

GULF OIL CORPORATION

(Signed) S. G. Sanderson
General Superintendent"

LLG:WAG
8-27-40

BY MR. CRAGEN: Representing the El Paso Natural Gas Company, we request that you completely ignore that recommendation, or adjourn until we have time to study it.

I swear we have done our best to try to cooperate, and after months and months and months they spring this thing on us when it calls for time to study it. They have ignored two

very important facts. First, contractual obligations of our company; and, second, they have utterly ignored the drainage of gas acreage we own and that other people own that would cut the take of gas down to roughly three thousand feet per well.

Mr. Hanson, representing the United States Government, said he certainly would protest that if it was put into effect. In this area here (indicating on map) in which we own five thousand acres of government gas rights, if that recommendation is put into effect, would completely drain the gas out of that area, less the three thousand odd feet in dozens and dozens of wells. That is the reason we ask the Commission to ignore that request completely, or that we be given a hearing on it.

You can question anything but our good faith in this matter, and I am going to briefly outline our situation, indicating we are at least in the best of faith.

We have in that area contracts that have in excess of fifteen years to run, on which we pay two cents a thousand for gas. We have many contracts that have five years to run on which we pay two cents for gas. The area outlined there is largely an area in which we pay, under contract, five cents a thousand for gas for sour gas and six cents for sweet gas. We are drawing up right now plans for the construction of a pressure station of sixty thousand capacity, to cost two hundred thousand dollars. Under our contractual obligations -- obviously if ratable take is put into effect we would increase the two cent gas and decrease the five and six cent gas, and we would not have to pay two hundred and fifty thousand dollars to complete a station right now. That is why we say nobody could question our good faith because ratable take would save us plenty of money.

We are facing existing contracts; we are facing a very definite decision of the Supreme Court in the Panhandle case, that we cannot divide up a market. These contracts were made in 1928 when there was no market. The Texas Company, the Continental Company, the Stanolind stuck their necks out and

took very firm obligations to drill a volume of wells and didn't know whether our company could market it or not. Our company risked six million dollars to start with, and today we have an investment of thirty million dollars, because those companies and our company created those markets, and if it were not for the risk they took and we took, there would not be any market. We have had this thing up for months upon months, and here at the eleventh hour they come along with a proposal that was never discussed with anybody, and it strikes me, if they treat the gas business that way, we ought at least to be given a hearing.

BY MR. GRAY: I am sorry Mr. Cragin takes that attitude. It was my view we were being quite generous with that territory from which the El Paso Natural Gas takes more than eighty per cent. We are not up here to argue about contracts. When we first started proration, there were also oil contracts that were ignored. That proposition is not the same as on the Panhandle proposition. It is an entirely different setup on the Panhandle as here. What we are talking about at the present time is a gas-oil ratio order. All we need do to be reasonable is to exempt an area sufficient to produce all the gas necessary for the market and that should satisfy immediate needs. We can later take care of a permanent setup. The order should indicate the areas that are to be exempted.

BY MR. SETH: I think there is a lot of merit in Mr. Cragin's statement. I don't believe the call was for a determination of whether or not a certain area is a gas pool rather than an oil pool -- I don't believe that is within the scope of the call, and I don't believe that can be determined at this hearing. I think the matter here is a hearing for a gas-oil ratio order, and the exemption of a particular area or the determination of whether it is a gas pool or an oil pool is an entirely separate matter, and if brought up at all, it should be brought up on a separate and distinct call.

MR. KAY (Skelly): We have a number of gas wells in this particular area to the south, and naturally we realize there is a considerable unratable take in some of the wells which are selling seven million feet a day. We feel the suggestion made by the Gulf is fair and reasonable. What we are interested in is conservation. We have a great many state land leases in the Mattix Pool. We have leases not far away from the El Paso's, and where they have taken four million feet of gas the bottom hole pressure on the leases show a decline of about forty pounds a month. This is not a suggestion to consider what is gas and what is oil areas. I don't see how the Commission could consider, at this hearing, and make a determination as between gas and oil areas. And I feel the suggestion made by the Gulf leaves the gas company open to run their affairs to the south, and if the royalty owners are satisfied, what is being done may not be the business of the oil companies, still it must look this way: There are state leases that are suffering from the large volume of gas being taken out of adjacent leases. Certainly I don't see how the Commission can decide those leases are in a gas belt or an oil belt unless there is some evidence put in to show you do have a fair division line. We are certainly vitally concerned when bottom hole pressure goes off forty to fifty pounds. We are vitally concerned from the standpoint of conservation. We certainly think, after all the years that withdrawals have been made -- the total of the past years is 133,000,000 feet -- it is up to the point where some control should be exercised. We do not desire to do injury to the El Paso. We all appreciate that the gas market has expanded, and that sooner or later the gas will be depleted. We are concerned about the future. Are we going to sit back, on state leases, and have no sale for gas and have a few leases, owned by one particular company, drain everything? We doubt if the people who wrote the state law of New Mexico planned to let three or four leases drain the entire area. The State of

New Mexico and every government institution, when they see the records, would say there should be some fair division. It is a thing that is serious, and Mr. Gray's letter recommends a method of operation which means that gas wells will drain the reservoir to about the same extent the oil wells do. I don't think geologists can clearly separate gas and oil wells -- they are pretty much intermingled -- nobody knows until the wells -- the reservoirs are proven. Many gas zones produce oil on the edges. I would say it is a very serious condition to see large volumes of gas taken out through oil fields, through leases, that lowers the reservoir pressure and cause a lack of recovery of the oil. It certainly is not fair to let one well take out two million feet, and another well have no market at all. We think, from a strict construction of the rules -- all of the rules were approved -- worked on for months in some instances, and everybody said they were satisfied -- then they were written for presentation to the Commission -- surely after all these months of work, they should be approved when there is no objection by anyone but the Gas Company. I think the oil operators feel they should be put through as originally recommended.

As far as Mr. Seth's statement is concerned, if the Commission is going to let eighty or a hundred acres be classified as gas areas, you might as well throw conservation measures out of the window and say you cannot make any effort to correct waste and see that all get a fair share. At this time the oil operators are not telling the gas operators how to run their business. They are making a fair subdivision -- that gas wells be allowed to drain the reservoir to about the same degree that oil wells do. I don't think there is anything unreasonable about that.

So far as the size of the unit is concerned, the unit for the oil area has been forty acres. A good many wells have been plugged back and made into gas wells eventually. That is

going to prolong the life of El Paso's area. If you are going to establish the size of the unit, and I don't see any necessity to do that, unless you recognize the fact that the state at this time does not require gas to be taken ratably. Many wells take ten times their share, and many wells are not producing at all. Why should an operator complete a well when he has no market?

We feel the Commission should give fair consideration to the fact that the rules have been approved by the operators.

So far as the Skelly Oil Company is concerned, we will object to any allowance given gas wells up through the Mattix area, where, at the present time, pressure is going off fast. Some of those leases are state leases. Surely the state is concerned about the recovery of oil on their own leases. We feel that through that area the gas wells must be restricted. If they are not, we would say all the gas-oil ratio talk is of no benefit to anybody.

BY MR. CRAGIN: We are talking about this area north of this suggested line between gas and oil areas. About forty million feet a day, on an average, we are taking in this Hobbs plant recently constructed. They are blowing in the air seventy million feet a day. Who is wasting the pressure, us or the oil operators? They are dissipating this energy about two for one in the production of oil. How do they do it? Eight million feet a day they burn in a flare, and there has been as many as two hundred flares a day burning. This recommendation ignores the extent to which the energy is being dissipated by oil operators, and not the gas.

BY MR. RAE: Speaking of casing head gas, that is burned over to the El Paso Natural, and the residue is blown in the air at their plant. If they can make a market by boosting it in the line, the oil operators would approve, but no individual operator could do that. That is primarily the work of a casing head plant, which the El Paso has. Surely, if there is any steps to be taken in regard to that, it is the duty of the El Paso to take more of the gas that is blown in the air.

That is what the El Paso could do by putting a booster plant in, and use that. It is going to prolong the life of the field. It is to their advantage to do so. So far as the gas that is blown in the air at the casing head plants, probably in time the El Paso will gradually take care of that. We are all in the same boat, trying to conserve, and to make as much money as we can. I would gladly see the El Paso make progress, and we would be glad to make some ourselves. If anybody can see the trend of the times, they know we will approach a time when probably some further steps will have to be taken.

I have heard talk of the Consolidated Gas case. I have been involved in cases where that question was involved, and many capable lawyers and the Federal Courts have construed the statutes in regard to that. That is a case where the gas company owned 80% of the acreage, and other people demanded a share in the market. In that case they could not make the Consolidated share their market. That has nothing to do with waste of reservoir energy in the oil pools. It has nothing to do with every operator being given a fair share of the gas and oil under their tract, which the State of New Mexico has done so far as the oil is concerned, but not the gas.

BY MR. GRAY: I would like to ask a question in reference to that.

In that case the Consolidated controlled 80% of the acreage?

BY MR. RAE: 80% of the proven acreage, and their take a day was 20%?

BY MR. GRAY: That 80%, taking their market, was only about 20% produced?

BY MR. RAE: That is right.

BY MR. GRAY: It was a very different proposition. They were not draining other areas?

BY MR. RAE: That is right. I might say further, in the Henderson case, the Federal Court, in the State of Texas, had a right to, and Henderson was compelled to share the market with other

wells. In the State of Texas, in the sour gas areas, the state does have the right to prorate gas.

BY MR. GRAY: As far as we are concerned, we certainly do not want to make it difficult for the El Paso Natural Gas Company. They have gone into this area and have made a market. In exempting this particular area where, in 1939 their takes amounted to 80% or more of the total takes of the El Paso Natural, it was assumed that would take care of their needs. Mr. Cragin mentioned a section that should be exempted from any gas-oil ratio control, a section that is essentially gas. I believe the Yates area, ranging from Monument clear to the state line to the south, is actually predominantly gas bearing, and could at this time be exempted from the gas order. The only difficulty is to determine which wells should be exempted.

BY MR. CRAGIN: I want to go on record as stating we subscribe 100% to the fact that no one should be permitted to draw four or five million feet a day from a well and surrounding areas draw nothing because they do not have a market. I don't want to have anybody have the impression we have any other idea than just that. But if you are going to divide the area by arbitrary line, we are entitled to draw gas equal to the amount of gas being drained from the surrounding areas. If this recommendation is considered, we would like the opportunity of offering an amendment to paragraph -- 23 I think it is -- 22 and 23, that would permit an operator to draw off gas from any area in proportion to the acreage that gas is being withdrawn and the production of oil, in the surrounding areas.

BY MR. GRAY: Mr. Chairman: There is a map here -- I didn't intend it to be an exhibit -- it is merely information as I have been able to obtain it. The yellow areas on this map I believe are connected to the El Paso Natural Gas Company's lines and are producing at this time. The green areas are units which have, in the past, produced into the El Paso lines, but during 1940 have not sufficiently produced, and apparently are wells that cannot now produce against pressure resistance to go into the

the line. The red areas are entirely my own recollection, and that might not be too good, of gas wells which are not connected to the line. There is a red area along the township line of Township 24 between Ranges 36 and 37 -- I think possibly that is the area Mr. Rae talked about -- I will insert that in red.

About the unratable taking of gas: Where those yellow units are, units capable of producing gas, one may not produce any, the second produces 184,000 cubic feet, the next one produces 165,000 feet, and to the west of that one unit produces 206,000 feet. That means that within an area, none of the units more than a mile apart, there is a difference between the the number of thousands of feet taken of as much as 206,000 million feet during the first seven months of 1940.

BY MR. WILLIG (The Texas Company): You filed this map for the record?

BY MR. GRAY: I had not intended to because I was not entirely sure of all of the information. Some of the information came from Mr. Staley's office.

BY MR. WILLIG: There is one thing I misunderstood: The description of that line -- I believe your red area included the $\frac{1}{2}$ of Sections 7 and 18, Township 25, Range 37?

BY MR. GRAY: I don't believe that particular description is very important. I meant to include the $\frac{1}{2}$ of Sections 7 and 18. However, through an error of the draftsman, the line was drawn through the middle of the sections, and so far as I am concerned, that line is not definite enough to make any difference.

BY MR. WILLIG: I would like to file, for The Texas Company, a request for exemptions for fifteen wells, all of which lie in the area suggested as a gas reservoir. These requests for exemptions are filed under separate covers, and each folder has a description and history of the well --

BY MR. EVERMORE: I would like the wells by name.

BY MR. WILLIG: (Reading) "Subject: Application for exception to New Mexico Conservation Commission Order No. 250 and Final Order in this cause proposed for adoption on August 29, 1940,

Covering The Texas Company

M. L. Parker No. 1 - Eaves Pool
C. W. Shepherd No. (a) 1 - Jal Field
C. W. Shepherd No. (b) 1 - Jal Field
C. W. Shepherd No. (b) 2 - Jal Field
C. W. Shepherd No. (b) 3 - Jal Field
C. W. Shepherd No. (b) 4 - Jal Field
W. E. Lanehart No. 1 - Langlie Field
C. C. Cagle No. (a) 1 - Rhodes Field
C. C. Cagle No. (a) 2 - Rhodes Field
C. C. Cagle No. (b) 1 - Rhodes Field
C. C. Cagle No. (b) 2 - Rhodes Field
H. G. Moberly No. (b) 1 - Rhodes Field
W. H. Rhodes No. (a) 1 - Rhodes Field
W. H. Rhodes No. (a) 2 - Rhodes Field
State of M.K. "Y" No. 1 - Rhodes Field

BY MR. GRAY: Luckily all of those wells are in the area south and west of the red line?

BY MR. WILLIG: Yes.

BY MR. LIVERMORE: I would like to request permission to mail an application, at a later date, for exemptions on the same grounds as The Texas Company have, for the Great Western Producers, for State No. 1, in Sec. 16, due to the fact that well is offset by three wells which are asked to be exempted in The Texas Company's application, which are either direct or diagonal offsets of the Great Western Producers' State A-1.

BY MR. LIVINGSTON: You will file the usual request?

BY MR. LIVERMORE: I will file a short letter by mail, but I want that request in the record.

BY MR. WILLIG: I would like to ask it be made a part of the record that the wells for which The Texas Company is asking exemptions, all produce from the upper gas horizons, mentioned in that application.

BY MR. LIVINGSTON: Will you clarify this for the Commission, your requests for exemptions are from the existing order, and not under the proposed order?

BY MR. WILLIG: It covers both.

BY MR. HUGH JOHNSTON (The Continental): As there are many points in the recommendation submitted by the Gulf this morning that are ~~are~~ in addition to the original recommendations made by the Operators Committee of Lee County at this past hearing -- some of those points, we feel, might be a matter of opinion

so far as the experts are concerned, and not being an expert myself, it is impossible for me, representing The Continental Oil Company, to defend their interests, and we respectfully request this hearing be continued until such time as we have an opportunity to study the additional points brought out by the Gulf's recommendations.

BY MR. RAE: From the state lease record I have made a tabulation of takes of gas, by wells, which will help to give a picture of the extent, in the Mattix pool, they are draining the surrounding properties. I call attention particularly to wells in the Mattix Pool where over 4,000,000 feet of gas has been taken out, and I simply -- that is a tabulation that can be checked with the state lease records, and will help to give the Commission a picture of how important it is to the oil pool at this time to regulate the take of gas from wells within those oil areas, and the Commission can study the takes of gas over for themselves.

Mr. Cragin mentioned one other thing, and there has been considerable talk about contracts. We all realize how fortunate the companies are that made contracts at high prices for a considerable share of the market. We wish we had some too. But I think it is recognized by lawyers -- I am not a lawyer -- that any contracts made to sell oil or gas are always subject to state regulations. Any state law will take precedence over contracts, consequently I think argument or mention of contracts is entirely out of place here. As the Commission will remember, from the record, and as Mr. Gray pointed out, there were many contracts to sell large volumes of oil, guarantees for a large daily take. Those contracts became null and void when the state started to prorate.

BY MR. LIVINGSTON: Is it your desire to introduce the tabulation?

BY MR. RAE: It is a subject which can be checked from the state lease record.

BY MR. GRAY: There is one error pointed out by Mr. Willig, but I really see no difference whether that line is a quarter of a

quarter of a mile farther west or not. With reference to Mr. Johnston's request that the Commission further defer the promulgation of an order on gas-oil ratios, this particular subject has been studied for over a year. At the present time there is nothing in the Gulf's statement requesting a change in the proposed order submitted by the operators of Lea County. We merely have gone ahead and designated a particular area which immediately would be exempted from that order, for the purpose of clarification entirely. So that everything in this recommendation is beyond the proposed order as submitted by the Committee at the last hearing held on July 29th.

BY MR. CRAGIN: In answer to Mr. Gray's questioning the propriety of my mentioning contracts, I would like to have the record show those contracts are practically completely in interstate commerce, and as such, under the jurisdiction of the Federal Departments.

BY MR. JOHNSTON: It was our understanding that the original recommendations as submitted to the Commission, had to do entirely with gas-oil ratios. In so far as a definition of gas reservoirs is concerned, that would be a matter entirely up to the Commission, and is not a point to be argued before the Commission this morning. We are probably unprepared for this argument, which is our reason for making the request that the hearing be continued, provided these arguments go into the record as supporting or defining gas reservoirs or oil reservoirs. So far as the original recommendations are concerned, we are not objecting to those, although we do not subscribe to them entirely, but we were willing to go along as the original recommendations were written, but if these points brought up here this morning are to be considered by the Commission in arriving at the permanent order, we would like, as stated a minute ago, an opportunity to study those points and be able to submit whatever we might feel necessary to protect our interests.

BY MR. LIVINGSTON: Gentlemen, if you are through with your discussion as to Lea County, and so far the matters have been largely discussions and arguments -- if there is any further evidence to be introduced, it might now be introduced, and if you are through with Lea County for the time being, Eddy County should be heard, and then any other producing areas in the state.

BY MR. HUBBARD: Inasmuch as primarily the hearing, as I understood it, this morning was to discuss certain specific recommendations for the taking of gas-oil ratios, and their use after taken, I would like, in behalf of the Humble Oil Company, to urge the adoption of these rules as written.

In addition, we would like to urge upon the Commission, as the Gulf has urged, as I take it, that further hearings be held to consider the whole question of allocation of predominantly gas areas. We also would recommend to the Commission that the call for further hearings be so worded as to take in their scope the allocation of gas areas. We agree with Judge Seth that probably this hearing is not broad enough to discuss those matters. We had some objections, but --

BY MR. CHRISTIE: In so far as the gas-oil ratio order is concerned, we favor the adoption of the suggested or proposed recommendations, with the possible exception of Sec. 22. I think that is probably one section the Commission might need more evidence to support, whether a gas unit should not be larger than forty acres. In other words, if an operator had a tract larger than forty acres, whether on those tracts he might not be entitled to drain 160 acres, or 640 acres with one well -- that he would not be compelled to drill a well on each forty acres to offset oil wells. So far as the other conditions are concerned, we favor their adoption. We don't see any necessity for a continuance of the hearing so far as the gas-oil ratios are concerned. An analysis of Mr. Staley's report on remedial work being done, will show a great deal of good is being done. We think the order should be made permanent as soon as possible

so that this work will continue.

BY MR. KEITHAN (Phillips Petroleum Company): We would like to urge that the general rules as proposed be adopted, and that any special matters, as to gas-oil reservoirs, be taken up for hearing at a later date. We have certainly now all discussed the general rules, and I think the order should be made as soon as possible.

BY MR. CRAGIN: It seems to me the only thing before this Commission in the call for this hearing is the question of the recommended rules for the permanent order as applying to gas-oil ratios and certain exemptions. Other matters should be set for special hearings at some later date.

BY MR. DEWOODY: On March 5, 1940, George Livermore, of the Great Western, requested exemptions as to gas-oil ratios on wells Nos. 1, 2 and 3 located in the N $\frac{1}{2}$ of Sec. 32, Township 23 South, Range 37 East, which wells are operated by the Great Western Producers, Inc. The application for exemption was made by letter to the Hon. John E. Hiles. Attached to this letter is a case history of the three wells involved, along with the engineer's report substantiating the claim for exemption. On March 15, 1940, the Oil Conservation Commission granted the exemptions to Order No. 238, by letter to Mr. Livermore. Copies of this information and the reports above mentioned were published on June 7, 1940, by the Lea County Operators Committee in the engineering report entitled "Results of the Gas-Oil Ratio Survey and all Exemptions to the Gas-Oil Ratio Orders Nos. 238 and 250. Inasmuch as ample publicity has been given as to the exemptions to the gas-oil ratio orders on the above mentioned wells, and they have been presented to the Oil Conservation Commission, and since the Oil Conservation Commission has granted temporary exemptions to the orders Nos. 238 and 250, we urge and request that the exemptions be granted under the permanent gas-oil ratio order which is to be written.

BY MR. LIVINGSTON: Anything further for Lea County? If not, is

there anything to be presented for Eddy County?

BY MR. HUGH JOHNSTON: (Representing Continental and Loco Hills Operators Committee) Due to conditions beyond our control, in Loco Hills they have been unable to make the necessary survey to determine the Gas-Oil ratios and other factors to be considered in their recommendations to the Commission for a permanent order affecting Eddy County. In view of that fact, we respectfully request the hearing for Eddy County be continued approximately thirty days, at which time we feel we will be able to get the necessary information to make the recommendations. I have a letter here from the Secretary of the Loco Hills Operators Executive Committee, which I would like to leave with the Commission.

BY MR. WORDEN: You want that to appear in the record?

BY MR. JOHNSTON: Yes, if the Commission please.

EDDY COUNTY EXHIBIT No. 1

"August 27, 1940

State Oil Conservation Comm.,
Santa Fe,
N. M.

Gentlemen:

At a meeting of the Executive Committee of the Loco Hills Operators Committee, last night, it was decided that in view of the fact that we have been unable to run oil with any regularity due to pipe line congestion and hence unable to take gas oil ratios and bottom hole pressures with any regularity, to ask for an extension of time in which to make our recommendations for this area.

Thanks to the cooperation of the various purchasing companies and the Texas, New Mexico Pipe Line Company, this pipe line congestion has been eliminated by the laying of a 6" line by the Texas New Mexico Pipe Line Co. and we expect to commence taking gas oil ratios and bottom hole pressures in the near future.

With the above facts in mind we respectfully ask that the Commission grant a stay of 30 days in the hearings for this

field, or until September 29, as we feel that by this time we will have sufficient data to make intelligent recommendations.

Yours very truly,

Loco Mills Operators Executive Com.

by (Signed) Fred Brainard Sec."

BY MR. LIVINGSTON: Is there anything further from any other producing area in the state which has not been heard from? The Commission has authorized me to announce that the hearing is closed insofar as Lea County is concerned, but continued to November 15th, 1940, at ten o'clock A. M. at the Capitol, for the purpose of hearing from Eddy County and other areas in the state having producing wells, other than Lea County. The operators of Eddy County have requested additional time in order to complete bottom hole pressure surveys, and it is believed they will be ready by November 15th. The Commission, therefore, announces that the case is, for the purposes named, closed as to Lea County, and recessed as to Eddy County and to other areas, other than Lea County, to November 15th, 1940, at ten o'clock, A. M.

C E R T I F I C A T E

I hereby certify that the foregoing and attached twenty and one-half pages of typewritten matter are a true, correct and complete transcript of the shorthand notes made by me on the 29th day of August, 1940, at the recessed hearing before the Oil Conservation Commission in Case No. 21, and by me extended into typewriting.

Witness my hand this 6th day of September, 1940.

Ether Barton

CASE NO. 21.

(RECESSED HEARING ON AUGUST 29, 1940)

IN THE MATTER OF ADOPTION OF A FINAL ORDER GOVERNING GAS-OIL
RATIOS IN THE VARIOUS PRODUCING FIELDS IN NEW MEXICO.

NAME	COMPANY	ADDRESS
Harry L. Leland	Leland Oil Co.	Roswell
W. S. Hubbard	Hubbard Oil Co.	Houston
Robt. Dewey		Midland
J. Beck	Stamco	Port 7
J. H. Card	Standard Oil Co.	Ft. Worth
B. L. Gaffill	Atlantic Refg. Co.	Odessa
Edgar L. Luman		Odessa
D. R. McKeithan	Phillips Pet. Co.	Bartlesville, Okla.
C. A. Daniels	Phillips Pet. Co.	Amarillo, Tex.
A. E. Dilling	The Texas Co.	Ft. Worth, Tex.
H. L. Long Jr.	"	"
Glenn S. Siding	Jean County, Okla.	"
Joe Bruggins	Rowan Drilling Co.	Ft. Worth, Tex.
W. L. Schuck	Shell Oil Co.	Midland, Tex.
W. K. Davis	El Paso Natural Gas Co.	Del Rio, Tex.
Floyd Brett	Repollo Oil Co.	Hobbs, N. M.
J. B. Kennedy	"	Midland, Texas
H. E. DeBloody	Great Western Prod. Inc.	Odessa, Texas
George P. Livermore	Great Western Prod. Inc.	Odessa, Texas
L. J. Hannifin	Magnolia	Roswell, N. M.
Ed Loughery	"	Kermit, Tex.
E. W. Childers	Tide Water Assoc.	Midland, Tex.
A. P. Crain	El Paso Natural Gas Co.	Del Rio, Tex.
O. F. Hedrick	Texas Pacific Coal & Oil	Midland
H. J. Johnston	Continental Oil Co.	Wichita Falls, Tex.
E. L. Arnold	U. S. Oil Co.	Roswell
J. N. Duncanson	Phoenix	Albany, N. M.
Chas. C. Raa	Shelly Oil Co.	Midland

R.S. Christie American Pet. Corp. # Worth

THE TEXAS COMPANY

TEXACO PETROLEUM PRODUCTS



PRODUCING DEPARTMENT
WEST TEXAS DIVISION
H. S. COLE, JR., DIVISION MANAGER

P. O. BOX 1720
FORT WORTH, TEXAS

August 27, 1940

SUBJECT: APPLICATION FOR EXCEPTION TO NEW
MEXICO CONSERVATION COMMISSION ORDER
NO. 250 & FINAL ORDER IN THIS CAUSE
PROPOSED FOR ADOPTION ON AUGUST 29,
1940, COVERING

THE TEXAS COMPANY

M. L. Parker No. 1 - Eaves Pool
C. W. Shepherd No. (a) 1 - Jal Field
C. W. Shepherd No. (b) 1 - Jal Field
C. W. Shepherd No. (b) 2 - Jal Field
C. W. Shepherd No. (b) 3 - Jal Field
C. W. Shepherd No. (b) 4 - Jal Field
W. T. Lanehart No. 1 - Langlie Field
C. C. Cagle No. (a) 1 - Rhodes Field
C. C. Cagle No. (a) 2 - Rhodes Field
C. C. Cagle No. (b) 1 - Rhodes Field
C. C. Cagle No. (b) 2 - Rhodes Field
H. G. Moberly No. (b) 1 - Rhodes Field
W. H. Rhodes No. (a) 1 - Rhodes Field
W. H. Rhodes No. (a) 2 - Rhodes Field
State of N.M. "Y" No. 1 - Rhodes Field

The Honorable Commissioners,
Oil Conservation Commission,
State of New Mexico,
Santa Fe, New Mexico.

Gentlemen:

On April 1, 1940, your honorable body adopted regulations governing gas/oil ratios in the various producing fields in New Mexico, designated as Order No. 250, setting aside previous orders covering this matter. Order No. 250 is to be effective until final order is adopted in this cause and assigns the following maximum gas/oil ratio to the fields as shown:

<u>FIELD</u>	<u>RATIO</u>
Eaves	7,000
Langlie	7,000
Jal	10,000
Rhodes	2,000

8-27-40

A hearing has been called for August 29, 1940, for the purpose of considering proposals for the adoption of a final order in this cause.

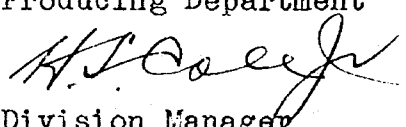
The Texas Company owns and operates the subject wells in the above fields and the restrictions to be imposed upon them by Order No. 250 and the proposed final order will result in physical waste and confiscation of property.

We respectfully submit for your consideration the attached discussions and exhibits, which for convenience are bound under separate covers for each field. In view of the facts presented, we respectfully request that subject wells of The Texas Company be exempted from restrictions imposed by Order No. 250 or final gas/oil ratio order which may be adopted after formal hearing set for August 29, 1940.

Your early favorable reaction and advice is solicited and will be appreciated.

Yours very truly,

THE TEXAS COMPANY
Producing Department


Division Manager

AEW-JRH

Encls.

2.09+1
ADDRESS ALL COMMUNICATIONS TO SECRETARY

EMERY CARPER
CHAIRMAN GENERAL COMMITTEE

BERT ASTON
CHAIRMAN EXECUTIVE COMMITTEE

FRED BRAINARD
SECRETARY

Loco Hills Operators' Committee

ARTESIA, NEW MEXICO

MEMBERS

MARTIN YATES, JR.
C. M. POPE, JR.
HUGH JOHNSON

August 27 1940

State Oil Conservation Comm.,
Santa Fe,
N.M.

Gentlemen;

At a meeting of the Executive Committee of the Loco Hills Operators Committee, last night, it was decided that in view of the fact that we have been unable to run oil with any regularity due to pipe line congestion and hence unable to take gas oil ratios and bottom hole pressures with any regularity, to ask for an extension of time in which to make our recommendations for this area.

Thanks to the co-operation of the various purchasing companies and the Texas New Mexico Pipe Line Company, this pipe line congestion has been eliminated by the laying of a 6" line by the Texas New Mexico Pipe Line Co. and we expect to commence taking gas oil ratios and bottom hole pressures in the near future.

With the above facts in mind we respectfully ask that the Commission grant a stay of 30 days in the hearings for this field, or until September 30, as we feel that by this time we will have sufficient data to make intelligent recommendations.

Yours very truly,

Loco Hills Operators Executive Comm.

by


Fred Brainard Sec.

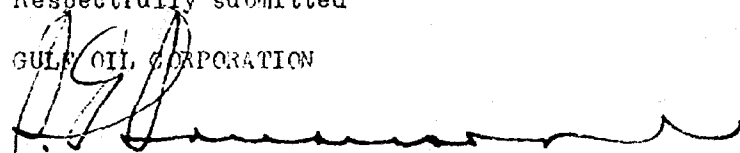
discriminatory, inequitable and conducive to underground waste. In addition, the potential capacity of natural gas wells in that area, namely, the Lynn, Cooper, Jal, Daves, Rhodes, Langlie, Mattix and Skelly pools is many times the available gas market. For these reasons it is recommended that as soon as practicable a hearing be called for the purpose of receiving evidence regarding a proration plan for natural gas in those pools. This is in accordance with the first paragraph of Section 10, Chapter 72 of the Session Laws of New Mexico, 1935, in which it is provided that, "Included in the power given to the commission is the authority: to collect data; to make investigations and inspections; to examine properties, leases, papers, books and records; to examine, check, test and gauge oil and gas wells, and tanks, plants, refineries, and all means and modes of transportation and equipment; to hold hearings; to provide for the keeping of records and the making of reports, and for the checking of the accuracy thereof; to limit and prorate production of crude petroleum oil and natural gas; to require either generally or in particular areas certificates of clearance or tenders in connection with the transportation of crude petroleum oil or any products thereof, or both such oil and products."

It is recommended that no changes be made in the wording of Paragraph 22 which would change the meaning of that paragraph as read into the record by Mr. Schuele. This paragraph which controls the amount of gas which may be produced from gas wells in a reservoir not designated as predominantly gas-bearing, might be termed the most important from the standpoint of conservation of any paragraph in the recommended order. All the conservation effected by all of the other paragraphs could be entirely dissipated if the provisions of Paragraph 22 were not included. It is quite obvious that the savings of gas and reservoir energy made possible by extensive remedial work might easily be lost and vast quantities of oil might be forever trapped within the reservoir if wells producing gas only from that reservoir are allowed to produce without restriction.

Since no reference was made in the call of the hearing to changing the size of units producing gas only from an oil reservoir, it is assumed that no evidence will be received on this subject. Insofar as the size of the unit in reservoirs predominantly oil bearing is concerned, it is believed that the hearings conducted during 1935 & 1936 included adequate evidence on the subject and that 40 acres is adequate and proper, whether the well produce oil or be a gas well in an oil reservoir. With reference to the size of the unit in areas designated as predominantly gas bearing, it is recommended that this subject be included in the Call for the hearing with reference to the proration of natural gas.

Respectfully submitted

GULF OIL CORPORATION


S. G. Sanderson
General Superintendent

LLG:WAG
8-27-40

402

BEFORE THE OIL CONSERVATION COMMISSION
IN THE MATTER OF CASE 21
REGARDING THE ESTABLISHMENT OF MAXIMUM GAS-OIL RATIOS AND THE
CONTROL OF PRODUCTION OF GAS FROM THE VARIOUS POOLS
IN THE STATE OF NEW MEXICO

Statement of the Gulf Oil Corporation

The Gulf Oil Corporation urges that the proposed gas-oil ratio order as read into the record by R. S. Schuele at the hearing held on July 29, 1940, be accepted without change and approved by the Commission as soon as possible. It is also urged that no blanket exception or exemption be allowed since there is danger that such action would nullify all of the conservation measures provided in the proposed order. Likewise there is danger that such blanket exception or exemption would nullify all of the remedial and conservation work which the operators of oil properties have so heartily cooperated in performing at great expense. This would be waste in every sense of the word and would cause irrecoverable loss of oil underground.

It is recommended that exemption be granted to individual wells or properties only, after the owner has submitted to the Commission adequate proof that the well or property is producing from a predominantly gas-bearing reservoir or that it is subject to paragraph 27 of the proposed order.

It is recognized that the El Paso Natural Gas Company is faced with a serious situation in that it is connected to wells having a potential capacity of many times the available market, but that the proposed order if applied before designating that certain reservoirs are predominantly gas bearing, would reduce the available gas to approximately one-fourth of the El Paso's requirements. To remedy this situation it is recommended that concurrently with the promulgation of the gas-oil ratio order a temporary order be made designating the following areas as predominantly gas bearing: All of Township 26 South, Range 37 East; all of Township 26 South, Range 36 East; all of Township 25 South, Range 36 East, except the north tier of sections; the west half of west half of Sections 7 and 18; all of Section 19; the west half of Section 20; all of Sections 28, 29, 30, 31, 32 and 33. It is believed that most engineers and geologists agree that the area described is predominantly gas bearing, and since during the year 1939 slightly in excess of 80% of El Paso Natural Gas Company's takes were from that area, it should satisfy El Paso's objection and make available to it a sufficient supply of gas. In recommending that the above described area be temporarily designated as predominantly gas bearing, it is not intended that it be temporary to the extent that it would need to be renewed from proration period to proration period, but should remain in force only until an investigative body can pass upon and present evidence to the Commission as to which reservoirs should be designated as predominantly gas bearing.

The foregoing has to do with the control of gas production and gas-oil ratios in oil reservoirs. Another somewhat related subject, the control of the production of natural gas from gas reservoirs, also demands attention. For several years there has grown up the practice of unequal gas withdrawals from certain wells in the southern portion of Lea County. The practice has been

CASE NO. 21.

BEFORE THE OIL CONSERVATION COMMISSION
FOR THE STATE OF NEW MEXICO

RECESSED HEARING RELATIVE TO
ADOPTING A FINAL ORDER GOVERNING
GAS-OIL RATION ON THE VARIOUS PRO-
DUCING WELLS IN NEW MEXICO

THE CAPITOL, SANTA FE, NEW MEXICO
AUGUST 12, 1940.

Pursuant to recess taken on July 29, 1940, hearing in
the above entitled matter was resumed in the Governor's Office,
Capitol Building, Santa Fe, New Mexico, at the hour of ten o'clock
A. M. of August 12, 1940, the Commission sitting as follows:

Hon. John E. Miles, Governor, Chairman of Commission
Hon. Frank Worden, Commissioner of Public Lands, Secretary
Hon. A. Andreas, State Geologist, Member
Hon. Carl B. Livingston, Attorney for Commission.

APPEARANCES:

<u>NAME</u>	<u>COMPANY</u>	<u>ADDRESS</u>
Glenn Staley	Lea County Operators	Hobbs, New Mexico
H. L. Johnston	Continental Oil Co.	" " "
Ed Koeler	" " "	" " "
R. G. Schuehle	Shell Oil Co.	Midland, Texas
J. O. Seth	Stanolind	Santa Fe, New Mexico

The hearing was called to order by Governor Miles, who
announced that the Commission was ready to hear from those present.

BY MR. SETH: I think, if the Commission please, there has been
some request for a postponement, and I think the only thing
before the Commission is to agree on a satisfactory date.

Whereupon, after discussion, it was agreed that this
hearing be recessed until the 29th day of August, 1940

BY MR. WORDEN: What about the El Paso Natural Gas?

BY MR. STALEY: They are getting along pretty well with their work,
and were gathering a bunch of engineering data.

BY MR. WORDEN: Another thing,-- what position is Eddy County going
to be in? Are they going to have to make a bottom hole pressure
survey?

BY MR. JOHNSTON: I don't want to speak for Eddy County operators,
but I am a little doubtful if they will have the information

they feel they will need to make their recommendations at that time. I do know the Eddy County operators are very much concerned as to the order that will be issued regulating the ratios for that County; and just how soon they will be able to submit recommendations -- they may be able on the 29th to submit recommendations so far as wells in Eddy County are concerned. The Continental Oil Company has very few wells. On our wells we do have the bottom hole pressure survey made, along with the gas-oil ratio tests. I think they do feel they should go a head and get the feeling of the operators on a regular routine basis.

BY MR. SETH: There is no reason for holding up the Lea County order.

BY MR. JOHNSTON: We have no objection to having the order issued as recommended for Lea County.

BY MR. LIVINGSTON: As to Eddy County, the whole matter could be continued to one date, and if Eddy County needs more time, it could be continued again when the Commission meets.

BY MR. JOHNSTON: I believe that if the pipe line situation is cleared up in Eddy County where we have adequate gathering systems, I believe it will be possible to operate all wells on a routine basis, and that matter may be cleared up by the 29th, but we do not know whether the pipe line company will be able to relieve the situation. The pipe line company has, I understand, indicated a willingness to revamp their gathering system and setup in such a way that the operators will not be handicapped.

BY MR. ANDREAS: I understand they agreed to do that.

BY MR. JOHNSTON: They have indicated their willingness. We hope they will. That is something that has to be done before you can make a good accurate survey on that territory.

BY COMMISSIONER MILLER: If there is any doubt about this going to be enough time --

BY MR. SETH: I think Lea County can be disposed of, and there is no serious waste of gas in Eddy County.

BY MR. JOHNSTON: Eddy County does have some problems peculiar to that county, and would have to have consideration from the

standpoint of the pool or field, definitely apart from Lea County.

BY GOVERNOR MILES: Where does the Natural Gas get their gas?

BY MR. BETH: Lea, except the gas furnished to Roswell -- those are gas wells.

BY MR. ARTHUR: If they have some individual problems, we could accept or reject the recommendations to make it apply to Lea County only, rather than the whole state. That would clear up the Lea County situation, and give Eddy County plenty of time to present their suggestions.

BY MR. JOHNSTON: I think that is alright.

Whereupon, there being no further business to come before the Commission, this hearing was recessed until ten o'clock A. M. of August 29, 1940.

C E R T I F I C A T E

I hereby certify that the foregoing and attached two and one-half pages of typewritten matter are a true, correct and complete transcript of the shorthand notes made by me on the 12th day of August, 1940, at the recessed hearing before the Oil Conservation Commission in Case No. 21, and by me extended into typewriting.

Witness my hand this 14th day of August, 1940.

Arthur Barton

File #1.
Page #2 - Picture of Audubon. Richard Pitt
Copy + annotated with the Co. for order of transmission
regarding reproduction in portion of Sample Pool.
(9:00 a.m. December 11, 1948)

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