The above recommendation has been carried out to a limited extent during the year 1942 as shown by the following tabulation and is being carried out to a much greater extent in 1943:

(These figures do not include Maljamar Field or gas run to El Paso Plant No. 1 dry gas)

Total casinghead gas received in Lea County Plants	69,754,102	MCF
Total casinghead gas consumed as plant & lease fuel	7,551,636	"
Total casinghead gas shrinkage	4,122,172	"
Total casinghead gas vented	46,504,931	"
Total casinghead gas sold commercially	10,850,422	"
Barrels gasoline	1,723,575	"
Barrels butane, etc.	181,307	"
Total estimated casinghead gas (less Maljamar Field) prod. Lea County 1942	84,767,118	"
The percentage of gas vented from gasoline plants in 1942, as above described, was	66.67	

As a result of installation of additional lines and compressors by one of the major natural gasoline plants late in 1942, the percentage of gas vented in January, 1943 is indicative of a vast improvement in the picture as revealed by the following figures:

(Figures do not include Maljamar Field or dry gas from El Paso Plant No. 1)

Total casinghead gas received	6,023,169	MCF
Total casinghead gas consumed as plant & lease fuel	689,701	"
Total casinghead shrinkage	361,732	"
Total casinghead gas vented	2,695,394	"
Total casinghead gas sold commercially	2,223,486	"
Barrels gasoline	263,461	"
Barrels butane, etc.	30,291	"
Percentage of gas vented from gasoline plants during January, 1943 as above described, was	44.75	

The committee appointed for studying and proposing the experimental work to be done in the Eunice and Monument Fields with regard to transfer of allowable from high gas-oil ratio wells to lower gas-oil ratio wells has used the information available in the periodic reports of Mr. Staley's office to compile the theoretical effect of transferring. These compilations are:

TABLE I. Wells shut in due to high gas-oil ratio

TABLE II. Wells which have been granted exemption to Order No. 250 of the Commission.

TABLE III. Marginal well nominations as submitted by the operators

TABLE IV. List of leases composing only one well and production information.

TABLE V. List of two unit leases and the calculated effect of transferring allowable to wells having lower gas-oil ratios.

TABLE VI. List of leases having three or more wells on contiguous portions of the lease and the calculated effect of transferring allowable to wells having lower gas-oil ratios.

TABLE VII. Summary of Tables IV, V and VI.

In calculating the effect of the transfers the committee used only information submitted by the operators on Form C-115 or recent tests by Mr. Staley's office. No consideration was given to any changes in gas-oil ratio for better or worse that may result from such transfer. Also in making the calculations no transfer was made unless there was an approximate saving of 500 cu/ft/bbl. and no well received more than two allowables (since gas-oil ratios were available only in conjunction with operator's report in Form C-115 on monthly production, their figures were used in all tables). While in these calculated transfers, the entire allowable of higher ratio wells was made to another well, it is of course, possible and probably desirable to distribute such transferred allowable to several wells where feasible.

Provided the operator recommend the adoption of a plan to transfer allowables the committee submits the following suggestions:

1. Transfer of allowable will be permitted only after application to and approved by the Commission. The application shall show 48-hour individual tests of production of oil, gas and water of the well from which transfer is requested and the well or wells receiving the transferred allowable. Such tests shall have been made within 30 days of date of submitting request for transfer. A plat of the wells involved shall be attached and the amount of oil to be transferred to each such well. Vote 4-0.

2. Permits to transfer shall be in force for a period of one year from date of approval. Renewals may be obtained at the discretion of the Commission only upon resubmission of the information as shown in (1) above.

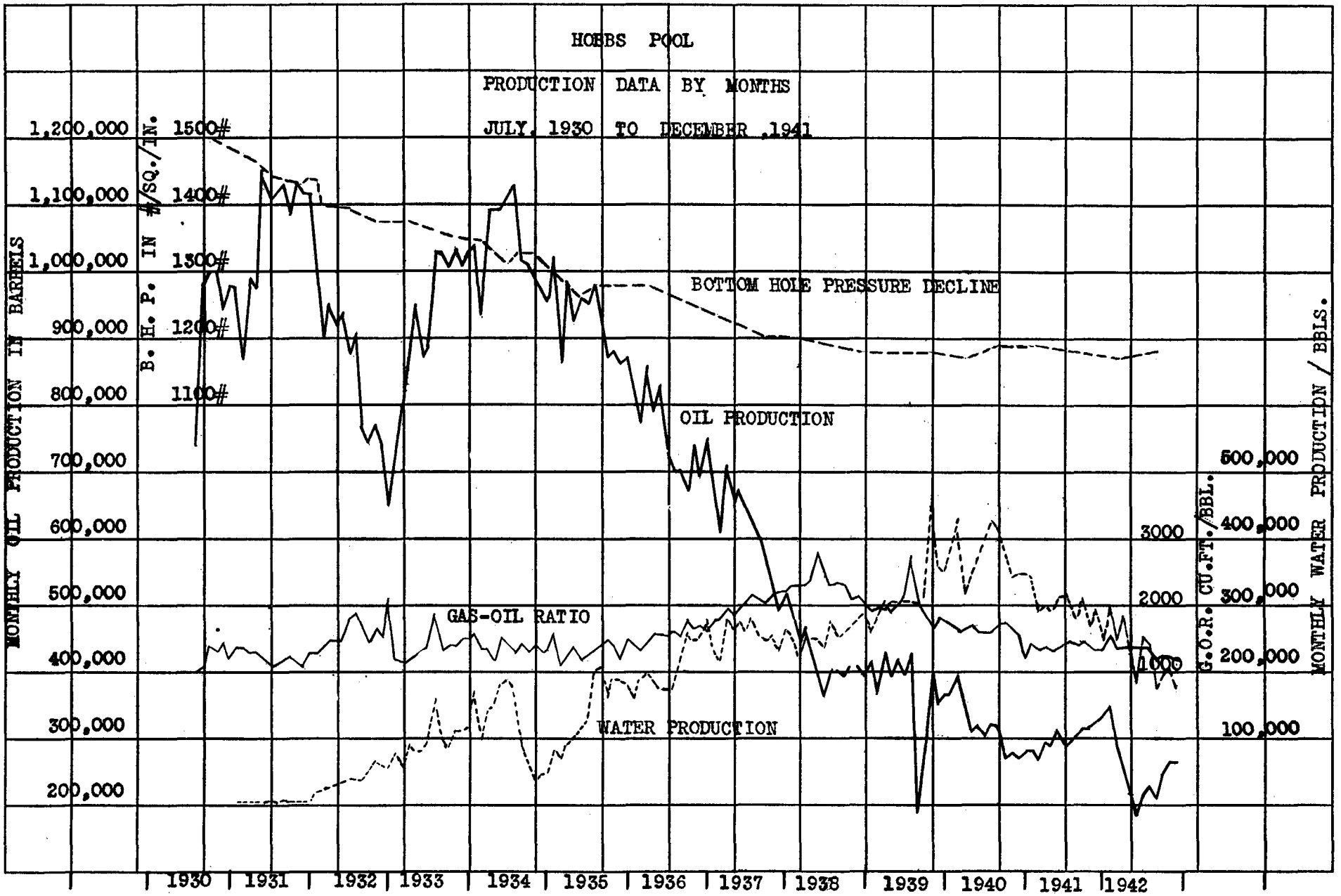
3. Transfer of oil from one unit to another or others will be permitted only with contiguous portions of the same basic royalty provided the areas involved shall not exceed 320 acres.

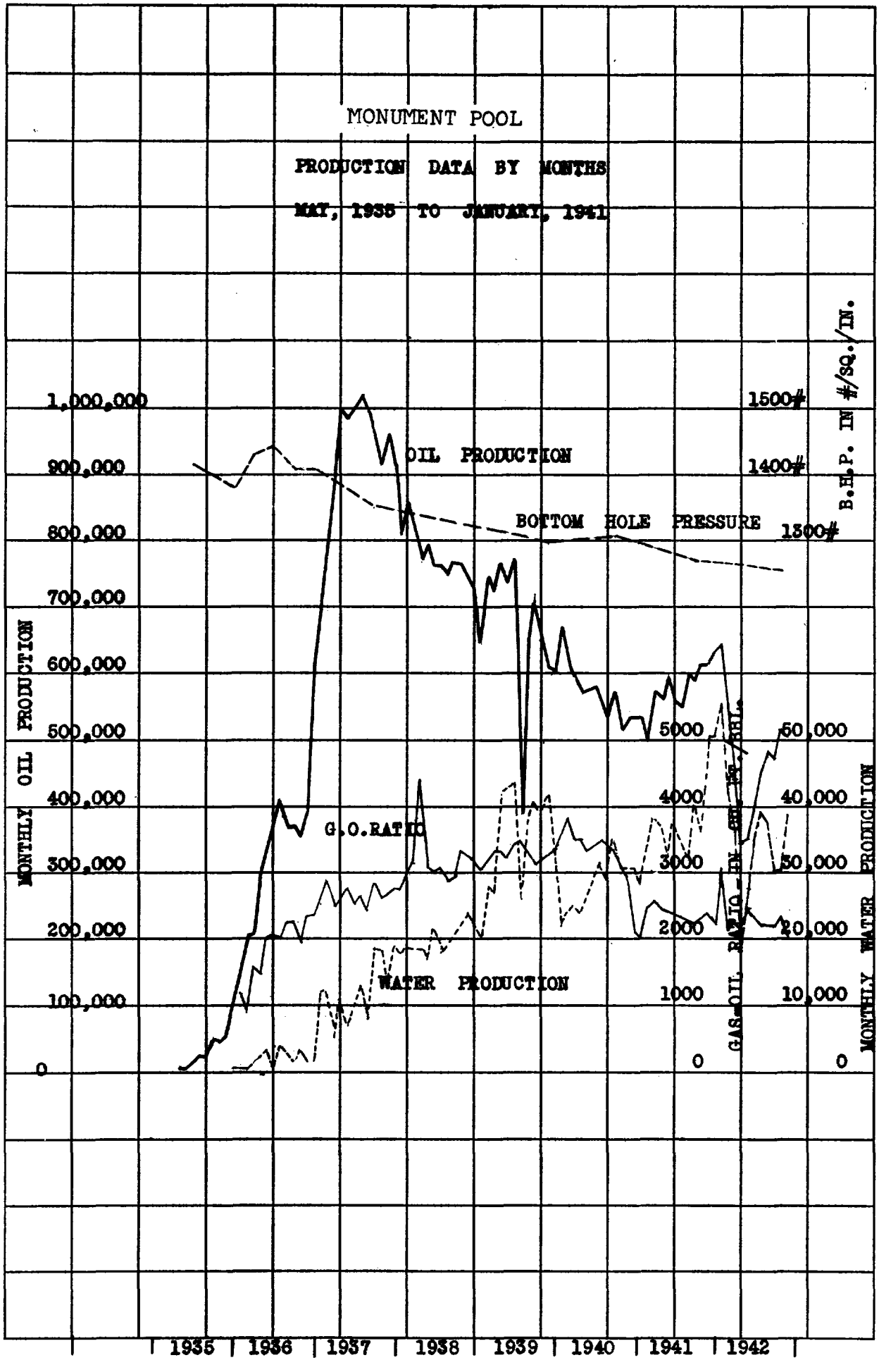
4. Transfers of allowable oil can be made to a well or wells with a lower gas-oil ratio.

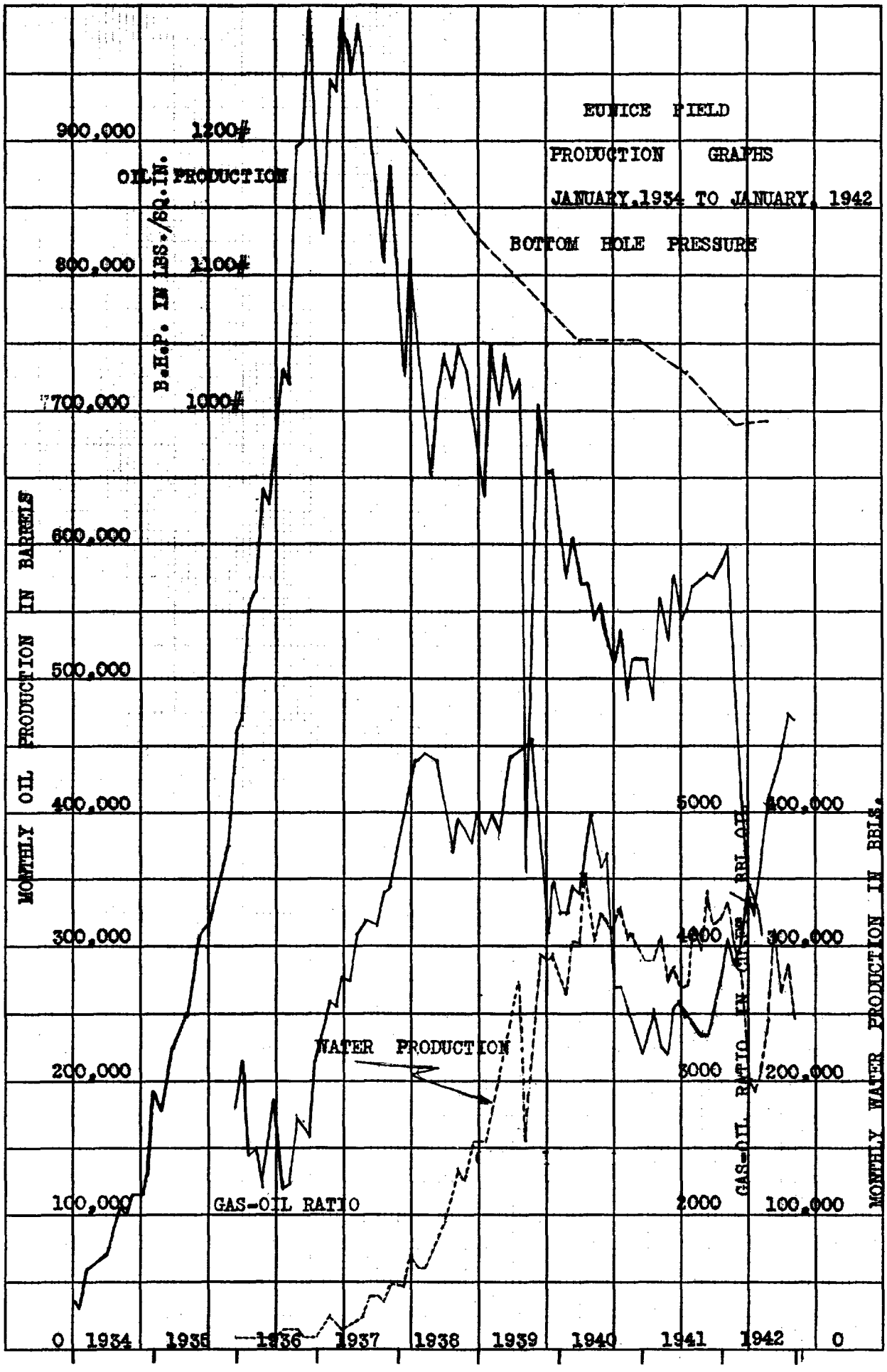
5. The amount of allowable transferred shall be the marginal or normal allowable for the field, whichever is the smaller, and not affected by Order No. 250 except as it may be affected by the gas-oil ratio of the well or wells to which transfer is made.

6. No well shall be permitted to produce an allowable in excess of two wells.

Don Topper - Amerada Pet. Corp.
L.L. Gray - Gulf Oil Corp.
Ralph O'Neil - Phillips Pet. Co.
S.V. McCollom - Continental Oil Co.
R.S. Dewey - Humble Oil & Rfg. Co.


HOBBS POOL
PRODUCTION DATA BY MONTHS
JULY, 1930 TO DECEMBER ,1941
MONTHLY OIL PRODUCTION IN BARRELS
B. H. P. IN #/SQ./IN.
G.O.R. CU.FT./BBL.
MONTHLY WATER PRODUCTION / BBLS.
1,200,000
1,100,000
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
1500#
1400#
1300#
1200#
1100#
3000
2000
1000
500,000
400,000
300,000
200,000
100,000
BOTTOM HOLE PRESSURE DECLINE
OIL PRODUCTION
GAS-OIL RATIO
WATER PRODUCTION
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942


MONUMENT POOL
PRODUCTION DATA BY MONTHS
MAY, 1935 TO JANUARY, 1941
OIL PRODUCTION
BOTTOM HOLE PRESSURE
G.O.RATIO
WATER PRODUCTION
MONTHLY OIL PRODUCTION
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
B.H.P. IN #/SQ./IN.
1500#
1400#
1300#
GAS-OIL RATIO - IN CU. FT. PER BBL.
5000
4000
3000
2000
1000
0
MONTHLY WATER PRODUCTION
50,000
40,000
30,000
20,000
10,000
0
1935
1936
1937
1938
1939
1940
1941
1942


EUNICE FIELD
PRODUCTION GRAPHS
JANUARY, 1934 TO JANUARY, 1942
BOTTOM HOLE PRESSURE
OIL PRODUCTION
B.H.P. IN LBS./SQ.IN.
1200#
1100#
1000#
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
MONTHLY OIL PRODUCTION IN BARRELS
WATER PRODUCTION
GAS-OIL RATIO
5000
4000
3000
2000
GAS-OIL RATIO IN CUBIC FEET / BBL OIL
600,000
500,000
400,000
300,000
200,000
100,000
0
MONTHLY WATER PRODUCTION IN BBLS.
1934
1935
1936
1937
1938
1939
1940
1941
1942

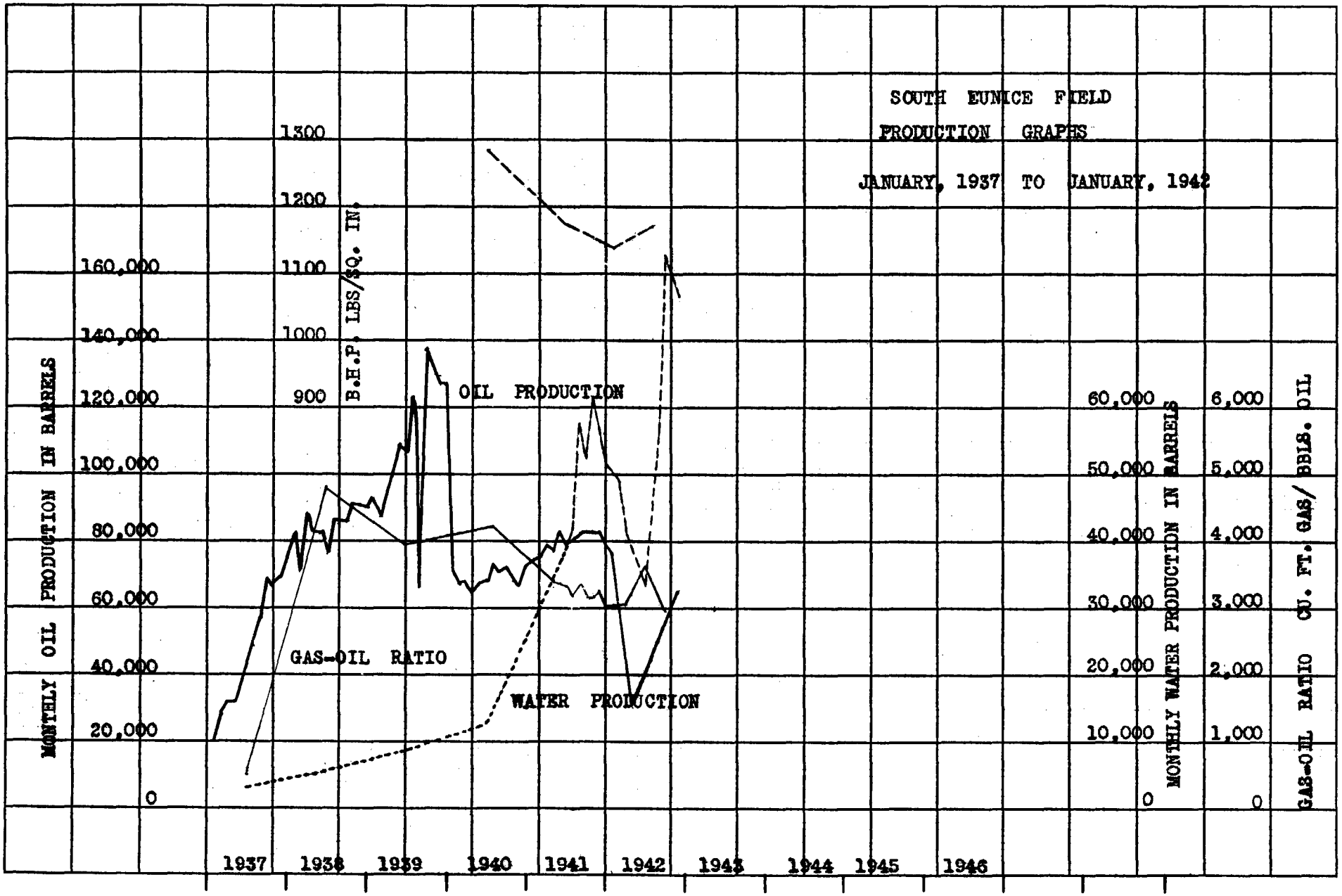

SOUTH EUNICE FIELD
PRODUCTION GRAPHS
JANUARY, 1937 TO JANUARY, 1942
MONTHLY OIL PRODUCTION IN BARRELS
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
B.H.P. LBS/SQ. IN.
1300
1200
1100
1000
900
OIL PRODUCTION
GAS-OIL RATIO
WATER PRODUCTION
MONTHLY WATER PRODUCTION IN BARRELS
60,000
50,000
40,000
30,000
20,000
10,000
0
GAS-OIL RATIO CU. FT. GAS/ BBLS. OIL
6,000
5,000
4,000
3,000
2,000
1,000
0
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946

TABLE 2

EXEMPTED WELLS UNDER GAS-OIL RATIO ORDER

FIELD	COMPANY	LEASE	WELL		S.T.R.	AUG. PROD.	GAS VOLUME	GAS OIL RATIO	WATER	COMPUTED PROD.	GAS VOLUME	GAS OIL RATIO	REMARKS
Monument	Anderson Prichard	Britt B	1	N	5-20-37	1182	43803	37058		155	6138		Marg.23 bbls.
		State A	1	E	2-20-36	600	1459	2431		600	1459	Doubtful	if exemption is granted
	Atlantic	Crutch.	1	I	32-19-37	1161	3832	3301	4644	1023	3377	"	
	Continental	Britt B	1	M	10-20-37	895	17546	19605	1740	310	6138		
		Britt B	3	L	15-20-37	1036	183859	177470	192	31	6138		
		Britt B	4	M	15-20-37	1035	28898	27921	192	217	6138		
		Sanderson B	1	A	10-20-36	930	30607	32911	1305	186	6138		
		Sanderson B	2	H	10-20-36	902	7077	7846	2175	775	6138		
		State A	3	E	26-19-36	268	6595	24610	25	248	6138	Marginal	15 bbls.
	Gulf	Smith	1	H	34-19-36	451	18054	40031	35	155	6138	Marginal	14 bbls.
			2	A	34-19-36	332	10342	31150	339	186	6138	Marginal	10 bbls.
		Whitmire	1	G	8-20-37	1087	15725	14460		434	6138		
	Repollo	W.P.Byrd	3	K	11-20-36	992	8053	8118		744	6138		
	Sun	Maveety	5	G	35-19-36	569	28836	50679		124	6138		
TOTAL						11440	404686	35375	10647	5188	78492	15130	
Eunice	Cities Service	Felton	1	C	28-21-36	300	11024	36747	10	186	7161	Marginal	14 bbls.
		State F	2	I	30-20-37	775	19995	25800	429	279	7161	Marginal	20 bbls.
	Continental	Lockhart	4	M	18-21-36	1098	12506	11390	682	620	7161		
			6	L	18-21-36	1093	10804	9885		713	7161		
		Lockhart B	1	D	31-21-36	930	7589	8160	217	868	7161		
		Meyer B	3	E	8-21-36	1108	7691	6941		1023	7100		
	Drlg.& Expl.	State	1	P	12-21-35	317	6403	20200		341	7161		
			2	O	12-21-35	930	7905	8500		837	7161		
			3	J	12-21-35	930	9700	10430		682	7161		
		State F	1	E	19-21-36	588	4704	8000		899	7161		
	Gulf	Felton	1	P	28-21-36	1083	5859	5410	24100	1023	5534		
	Leonard	State	4	G	22-21-36	1050	6716	6396	10296	1023	6543		
	Arnott	Ramsey D	2	A	33-21-36	1040	7713	7416	6300	961	7161		
		Sunshine	2	N	30-20-37	812	14697	18100	67	403	7161	Marginal	28 bbls.
	Phillips	New	2	H	26-20-36	383	15376	40147		186	7161	Marginal	14 bbls.
	Shell	State C	1	A	24-21-35	914	11983	13111	175	558	7161		
			2	H	24-21-35	915	8794	9612	46	744	7161		

TABLE I

WELLS SHUT IN DUE TO HIGH GAS OIL RATIO

FIELD	COMPANY	LEASE	WELL	S. T. R.
Monument	Amerada	Weir	7 O	26-19-36
	Amerada	Adkins	1 M	5-20-37
	Continental	State A	2 L	26-19-36
		Britt	1 C	8-20-37
		Britt B-15	3 I	15-20-37
		Britt B-15	7 N	15-20-37
	Ohio	McGrail	1 N	26-19-36
		McGrail	2 K	26-19-36
	Sun	Maveety	5 G	35-19-36
	Texas	Weir	2 N	23-19-36
	Gulf	Whitmire	4 H	8-20-37
Eunice	Gulf	B. Ramsey	8 L	4-21-36
	Humble	S. Aggies	8 C	31-20-37
	Texas	Rector	3 J	30-21-36

TABLE NO. 2 CONT'D

FIELD & COMPANY	LEASE	WELL	S.T.R.	AUG. PROD.	GAS VOLUME	GAS OIL RATIO	WATER	COMPUTED GAS	GAS VOLUME	GAS OIL RATIO	REMARKS
EUNICE-CONT'D											
Shell	State L	1 Q	1-21-35	1035	25649	24782	240	279	7161		
Two States	Atha	1 M	31-21-36	498	2271	4563	332	498	2271		Marginal 18 bbls.
Winkler Koch	State	1 R	5-21-36	1054	1717	1600		1023	1637		Doubtful if exempted
		1 Q	5-21-36	1054	1717	1600		1023	1637		" " "
TOTAL				17907	200813	11214	42894	14169	132137	9326	
GRAND TOTAL				29347	605499	20632	53541	19357	210629	10881	

APPROXIMATE GAS SURVEY (SHOWING DIFFERENCE IN AMOUNT OF OIL AND) (GAS PRODUCTION WITHOUT AND WITH PENALTY)

Difference	PROD.	GAS VOLUME	GAS OIL RATIO	GAS VOLUME PER DAY
Monument	6252	326194	20245	10552
Eunice	3738	68676	1888	2215
Both Fields	9990	394870	9751	12738

	TOTAL WELLS	EFFECTIVE IN SAVING
Monument	14	12
Eunice	21	15
	35	27

NOTE: The two columns shown on the right hand side of Tabulation 2 above, reflect amounts of oil and gas produced under application of Gas-Oil Ratio penalties. Other figures reflect amounts of oil, gas and water produced when Gas-Oil Ratio penalty has not been applied.

TABLE NO. 3

MARGINAL WELLS AS SUBMITTED BY THE OPERATORS NOVEMBER-1942

COMPANY LEASE	WELL	UNIT	S.T.R.	REQUESTED DAILY	NOMINATION MONTHLY	EUNICE PENALIZED TO	GAS-OIL RATIO	GAS VOLUME	WATER	REMARKS
AMERADA PET. CORP.										
State W	3	F	30-20-37	23	690		4959	3422		
"	4	E	30-20-37	23	690		1159	800		
ATLANTIC RFG. CO.										
State B	2	I	8-21-36	23	690		917	633		
" E	2	T	5-21-36	31	930		5321	4949		
" L	5	D	3-21-36	19	570		2071	1180		Gas lift
" O	1	E	3-20-37	7	210		912	192		Gas lift
"	2	D	3-20-37	25	750	270	29518	7970		Pump
CITIES SERVICE OIL CO.										
Felton	1	C	28-21-36	14	420		36747	15434	10	Exemption
State D	1	B	32-21-36	25	750		5250	3938		Gas lift
"	2	G	32-21-36	20	600		5010	3006		Gas lift
"	3	A	32-21-36	10	300	180	39795	7163		
"	4	H	32-21-36	5	150		4000	600		Gas lift
" F	1	O	30-20-37	30	900		5240	4716		
"	2	I	30-20-37	20	600		25800	15480	429	Exemption
"	3	P	30-20-37	15	450		5170	2327	30	
CONTINENTAL OIL CO.										
Lockhart A	1	H	30-21-36	7	210		400	84	327	Gas lift
"	2	A	30-21-36	9	270		400	108	1860	Gas lift
"	3	B	30-21-36	10	300		400	120	3100	Pump
"	4	G	30-21-36	16	480		400	192	24800	Gas lift
"	6	F	30-21-36	6	180		400	72	248	Gas lift
" B	6	M	14-21-36	27	810		6632	5372	310	
FIELDS, BERT										
Turner Estate	1	G	32-20-37	10	300		1800	540		Gas lift
"	2	C	32-20-37	13	390		1920	749		Gas lift
"	3	F	32-20-37	9	270		4380	1183		
GETTY OIL CO.										
State D	1	H	32-20-37	7	210		942	198	22	
GULF OIL CORP.										
Butler	1	O	19-20-37	28	840		1363	1145	72	
"	2	J	19-20-37	27	810		2860	2317	62	
Bell Ramsey	8	L	4-21-36	16	480		63321	30394		Shut in
" B	2	M	33-20-37	16	480		2324	1116	31	Pump
Campbell	1	N	7-21-36	19	570		9311	5307	4899	Gas lift

EUNICE-CONTD.

COMPANY LEASE	WELL	UNIT	S.T.R.	REQUESTED NOMINATION DAILY	MONTHLY	PENALIZED TO	GAS-OIL RATIO	GAS VOLUME	WATER	REMARKS
GULF-CONTD.										
Campbell	3	M	7-21-36	6	180		19509	3512	111	
"	4	L	7-21-36	16	480		11599	5568	31	
Collins	1	F	14-21-36	26	780		3047	2377		
"	4	K	14-21-36	13	390		5140	2005	180	
Janda B	1	J	32-21-36	19	570		3107	1771	15934	Gas lift
" D	1	T	2-21-36	14	420		8352	3508		
Leck	1	B	14-21-36	23	690		3263	2251		
Reeves	1	L	29-20-37	14	420		1254	527		Pump
"	2	E	29-20-37	5	150		600	90		Pump
Sunshine	2	N	30-20-37	28	840		18100	15204	67	Exemption
"	3	K	30-20-37	21	630		3810	2400		
White B	1	P	35-20-36	26	780	240	30715	7372		
NUMBLE OIL & RFG. CO.										
Fopeano	2	H	35-20-36	10	300		8020	2406	68	
"	5	O	26-20-36	8	240		10810	2594		
State B	9	K	29-21-36	20	600		2646	1588	265	Gas lift
MIDCONTINENT PET. CORP.										
Marshall	2	I	11-21-36	21	630		9500	5985	30	
MURRAY ET AL										
State	1	M	3-21-36	29	870		5150	4481		
"	2	L	3-21-36	18	540		5090	2449		
"	3	N	3-21-36	14	420		4890	2054		Gas lift
"	4	E	3-21-36	25	750		5110	3833		Gas lift
PHILLIPS PET. CO.										
Edna State	1	D	30-20-37	22	660		9477	6255		
Hudson	1	B	30-20-37	12	360		1996	719	287	Pump
Mexico	1	A	30-20-37	16	480		4828	2317		
New	1	A	26-20-36	16	480		7875	3780		
"	2	H	26-20-36	14	420		40147	16862		Exemption
Quapaw	1	P	19-20-37	16	480		687	330	9	
POLLARD, C.C.										
State	1	L	29-21-36	14	420				16	Pump
REPOLLO OIL CO.										
Berryman	1	O	11-21-36	21	630		880	554	15	
State "196"	2	L	32-20-37	12	360	150	47980	7197	6	
Ida White A	1	I	35-20-36	25	750	570	13588	7745	104	

EUNICE CONTD.

COMPANY LEASE	WELL	UNIT	S.T.R.	REQUESTED NOMINATION DAILY	MONTHLY	PENALIZED TO	GAS-OIL RATIO	GAS VOLUME	WATER	REMARKS
SHELL OIL CO., INC.										
State A	1	H	12-21-35	25	750				37	Pump
"	2	A	12-21-35	6	180		43659	7859		
" J	1	N	32-20-36	9	270		1629	440	4	
"	2	O	32-20-36	14	420		12411	5213	4	
"	3	P	32-20-36	11	330		3429	1132		
" K	2	H	36-20-36	30	900		2138	1924		
"	3	G	36-20-36	30	900		5882	5294		
"	4	B	36-20-36	30	900		4700	4230		
" M	1	I	24-21-35	7	210		27383	5750	2	
SKELLY OIL CO.										
State G	1	J	30-20-37	20	600		5879	3527	12	
STANOLIND OIL & GAS CO.										
Gilluly B	3	N	39-20-37	4	120		5600	672		
State C "11"	1	X	2-21-36	10	300		1646	494	15	Pump
"	2	W	2-21-36	11	330		1455	480	16	Pump
SUN OIL CO.										
Akens	6	Q	3-21-36	12	360		3500	1260		
THE TEXAS CO.										
Rector	1	I	30-21-36	5	150		9125	1369	16731	
"	2	P	30-21-36	5	150		8308	1246	16731	
"	4	O	30-21-36	20	600		12811	7687	1714	
TIDEWATER ASSOC. OIL CO.										
Marshall	1	G	13-21-36	3	90		2704	243	107	
TWO STATES OIL CO.										
Atha	1	M	31-21-36	18	540		4563	2464	332	
TOTAL	74				39120	37590	7955	289725	89088	
TOTAL MONUMENT & EUNICE	101				51780	49800	8470	411875	97054	

TABLE NO. 4

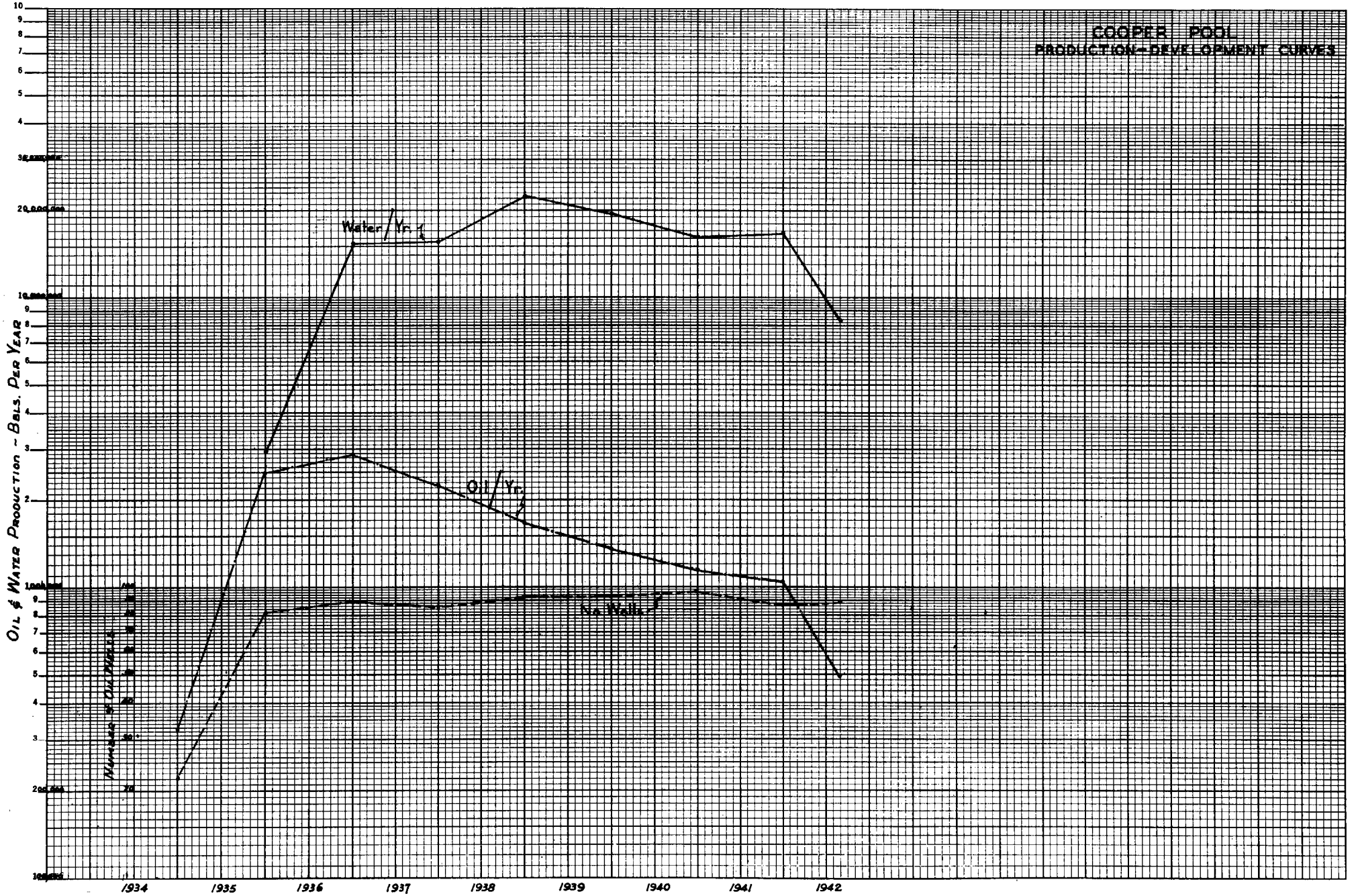
COMPARISON BETWEEN OPERATORS & GASOLINE PLANT GAS VOLUMES ON SINGLE WELL UNITS

MONUMENT

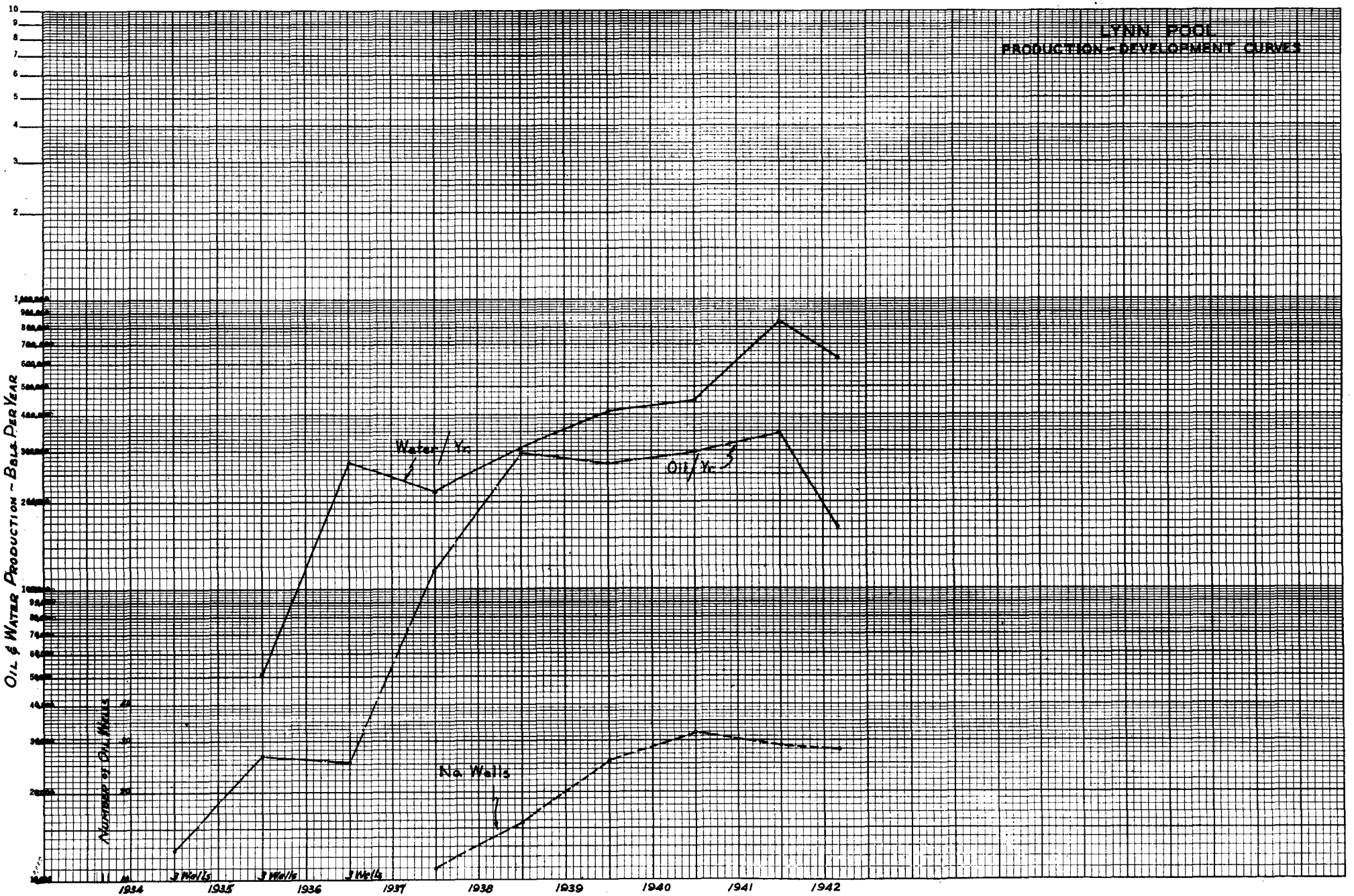
COMPANY LEASE	WELL	UNIT	S.T.R.	AUG. MO. PROD.	OPERATORS REPORTED GAS VOL MCF	GAS PLANT VOL MCF	OPERAT. G.O.R.	PLANT CAL. G.O.R.	MO. WATER PROD.	METHOD PROD.	DAILY ALLOW. MARG.	DAILY ALLOW. PENALIZED	REMARKS
AMERADA PET. CORP.													
Adkins	1	M	5-20-37	496	6254		12608						Well S.I. 10/8/42
Andrews	7	C	23-20-36	403	727		1803			F			
Culp	1	O	21-19-37	1316	788	1007	599	765		F			
Gaither	1	I	34-19-36	893	2237	4492	2505	5030		F			
Haney	1	M	33-19-37	1275	487	647	382	507		F			
Love	1	J	32-19-37	932	994	1446	1067	1551	49				
State I	1	C	2-20-36	966	470	413	487	427		F			
State M	1	F	2-20-36	967	199		206			F			
State M	2	J	13-20-36	975	2121		2175			F			
State T	7	L	28-19-37	968	3774		3899		51	F			
State X	1	L	16-20-37	1108	603	817	544	737		F			
Weir A	1	L	25-19-36	142	456		3214			GL & F	4		
ANDERSON PRICHARD OIL CORP.													
Britt B	1	N	5-20-37	1182	41352		35000			F		23*	
State A	1	E	2-20-36	600	1459	1630	2431	2716		F			
ATLANTIC RFG. CO.													
Crutchfield	1	I	32-19-37	1161	3832		3301		4644	F			
CITIES SERVICE OIL CO.													
Persons	1	P	27-19-36	373	280		750		22	GL			
CONTINENTAL OIL CO.													
Britt A	1	D	18-20-37	912	412		452			F			
Britt B	1	C	8-20-37	367	1588	1393	4327	3796	573	F			Well S.I. 10/8/42
Britt B	1	N	10-20-37	895	14509		16211		1740	F			
Sanderson AB	1	D	14-20-36	924	1688		1827						
State A	1	I	7-19-37	562	225		400			GL	19		
State A	1	L	19-19-37	1012	417	269	412	266		F			
State C	2	E	16-20-37	1056	438	214	415	203		F			
GENERAL CRUDE OIL CO.													
State G	1	D	16-20-37	1261	817	528	648	419		F			
GULF OIL CORP.													
Bates	1	P	26-19-36	909	2151	7572	2366	8330		F			
Kutter D	1	M	8-19-36	1118	606	717	542	641		F			
Ship B	1	L	8-19-37	966	1663	2238	1722	2316		F			
Weir	1	A	35-19-36	510	2686	4542	5270	8905	229	F	17		
Weir B	1	J	26-19-36	235	766		3258		31	F	8		

COMPANY LEASE	WELL	UNIT	S.T.R.	AUG. MO. PROD.	OPERATORS REPORTED GAS VOL MCF	GAS PLANT VOL MCF	OPERAT. G.O.R.	PLANT CAL. G.O.R.	MO. WATER PROD.	METHOD PROD.	DAILY ALLOW. MARG.	DAILY ALLOW. PENALIZED	REMARKS
HUMBLE OIL & RFG. CO.													
State E	1	L	21-19-37	840	2175		2589		148	F			
LANE, J.F.													
Williams	1	M	34-19-37	842	1053		1251			F			
OHIO OIL CO.													
McGrail	3	H	27-19-37	859	2422		2820			F			
ORO PESO OIL CO.													
Weir	1	L	3-20-37	325						F			
PHILLIPS PET. CO.													
Culp	1	D	19-19-37	717	6012	8032	8385	11202		F		26*	
Land Office	1	K	19-19-37	1692	4458	454	2635	268		F			
Patsy	1	B	18-20-37	1494	318		213			F			
REPOLLO OIL CO.													
Bordages	1	M	28-19-37	583	356		610		104	F			
ROSLEY OIL CO.													
Crutchfield	1	H	32-19-37	821	970	10038	1122	11795		F			
SHELL OIL CO.													
Cooper A	1	B	4-20-37	1164	1356	819	1165	703		F			
State A	1	P	35-19-36	1014	1798	1023	1774	1008	65	F			
State F	1	I	29-19-37	794	1048	1563	1400	1968		F			
State G	1	M	16 -20-37	1179	1709	625	1450	530		F			
State H	1	I	20-19-37	941	3142	3662	3340	3891	40	F	8		
SKELLY OIL CO.													
Christmas	1	M	25-19-36	212	1264	5990	5964	28254		F			
SOUTHERN PET. EXPLORATION CO.													
Klingsmith	1	P	20-19-37	1582	1582		1000			F			
STANOLIND OIL & GAS CO.													
Gilluly A	1	M	8-20-37	961	104	116	108	121		F			
SUN OIL CO.													
Barr	1	M	24-19-36	124	5642		45500			F		6*	
SUPERIOR OIL CO.													
State	5	I	13-20-36	934	413	413	442	442		F			
THE TEXAS CO.													
Am. Nat. Ins.	1	C	18-19-37	1039	2119	2423	2039	2332	78	F			
Cook	1	A	32-19-37	832	739	826	888	992		F			
Kohane	1	A	18-19-37	990	2124		2145			F			
Kohane B	1	B	18-19-37	1167	3072		2632			F			

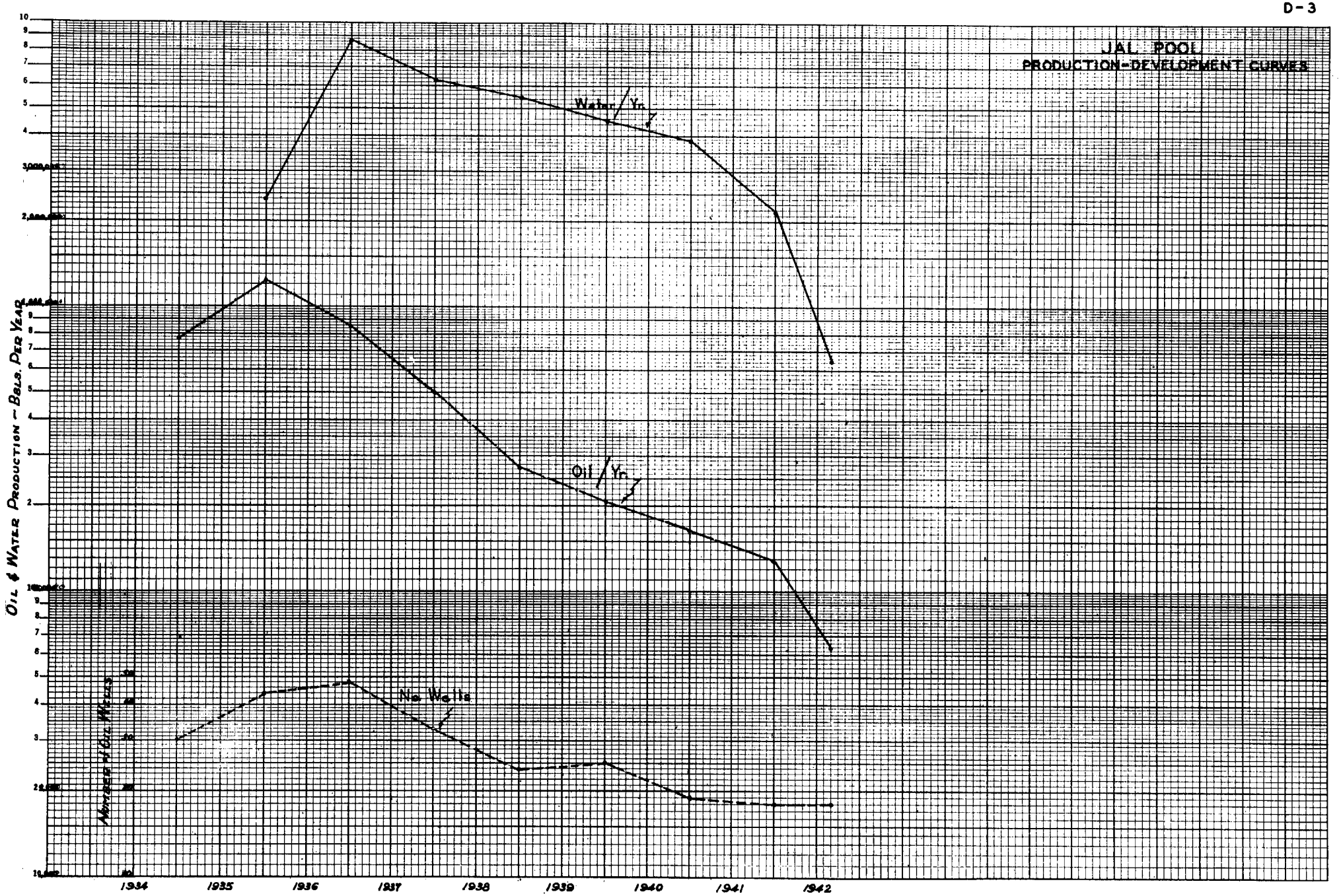
COOPER POOL
PRODUCTION-DEVELOPMENT CURVES



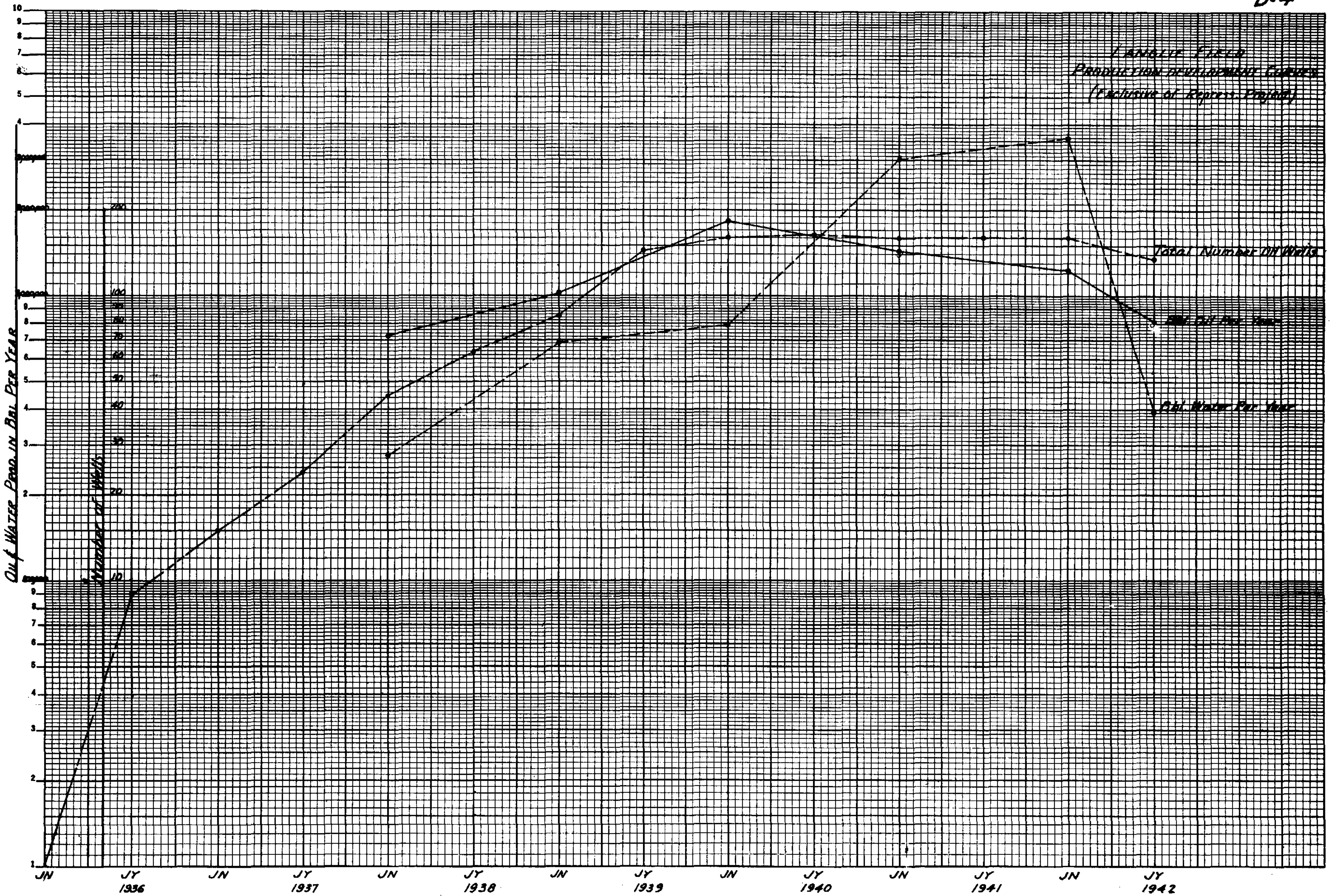
LYNN POOL
PRODUCTION - DEVELOPMENT CURVES



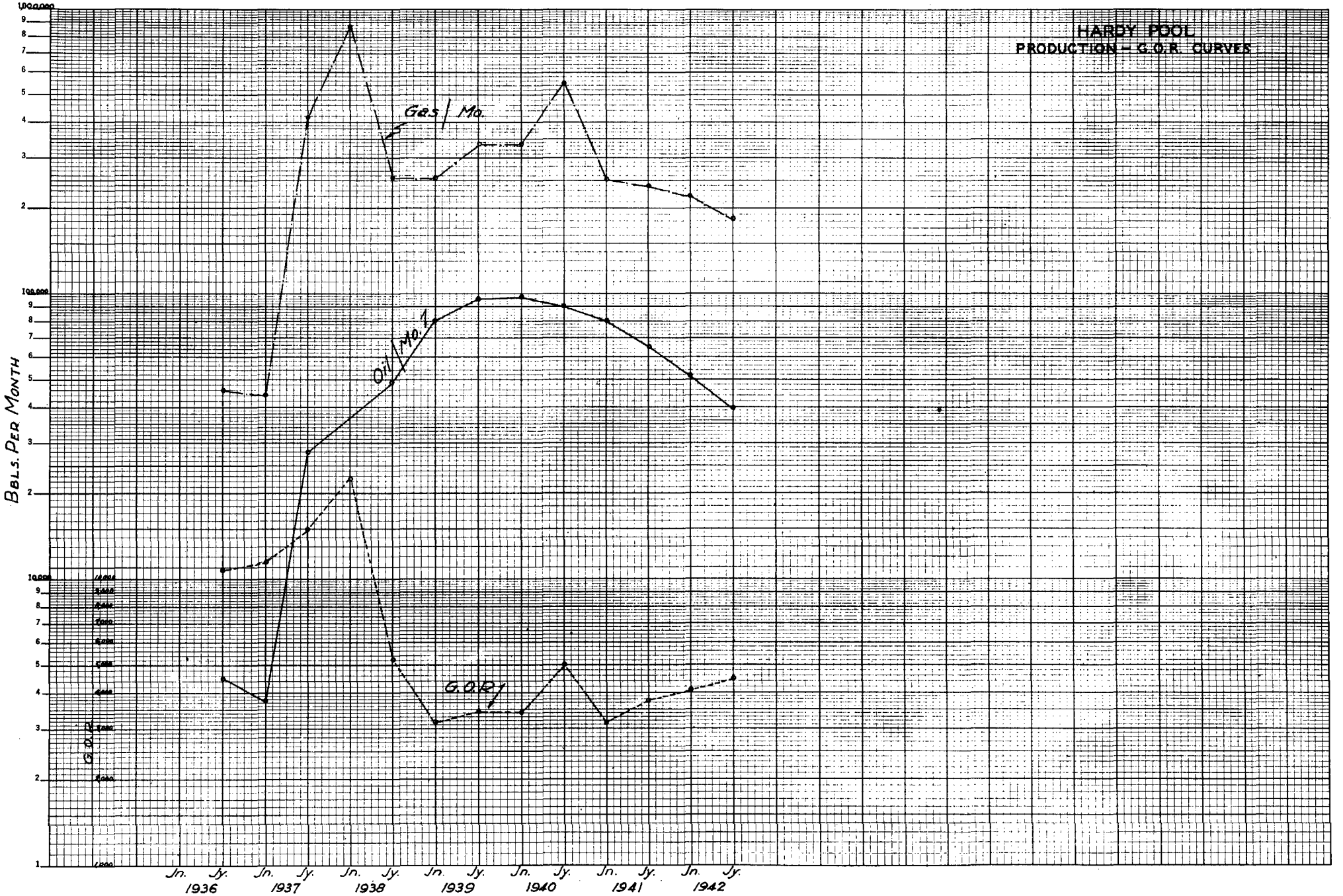
JAL POOL
PRODUCTION-DEVELOPMENT CURVES



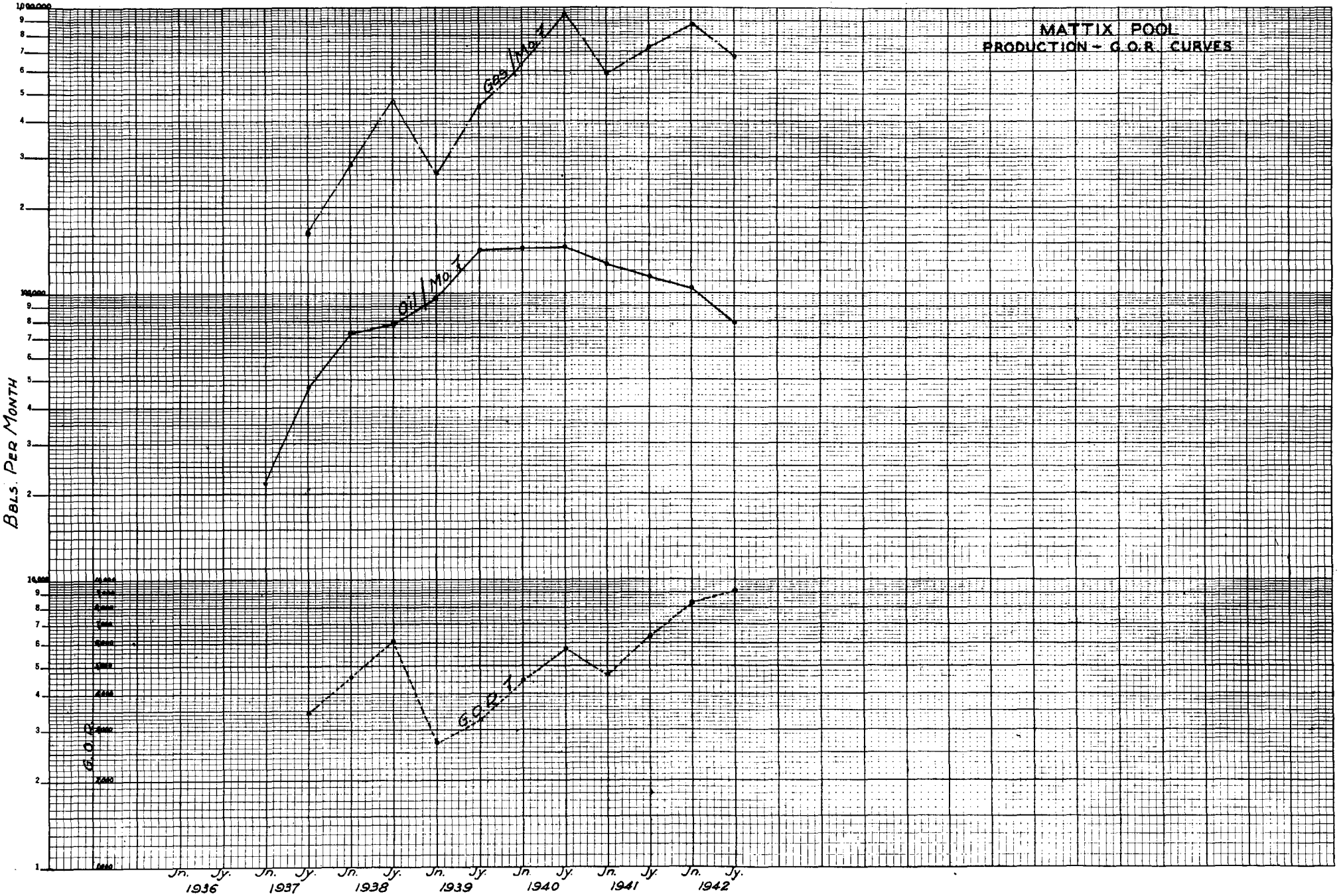
D-4


Langlie Field
Production Development Curves
(Exclusive of Repress. Project)
Total Number Oil Wells
Bbl. Oil Per Year
Bbl. Water Per Year
Oil & Water Prod. in Bbl. Per Year
Number of Wells
JN
JY 1936
JN
JY 1937
JN
JY 1938
JN
JY 1939
JN
JY 1940
JN
JY 1941
JN
JY 1942

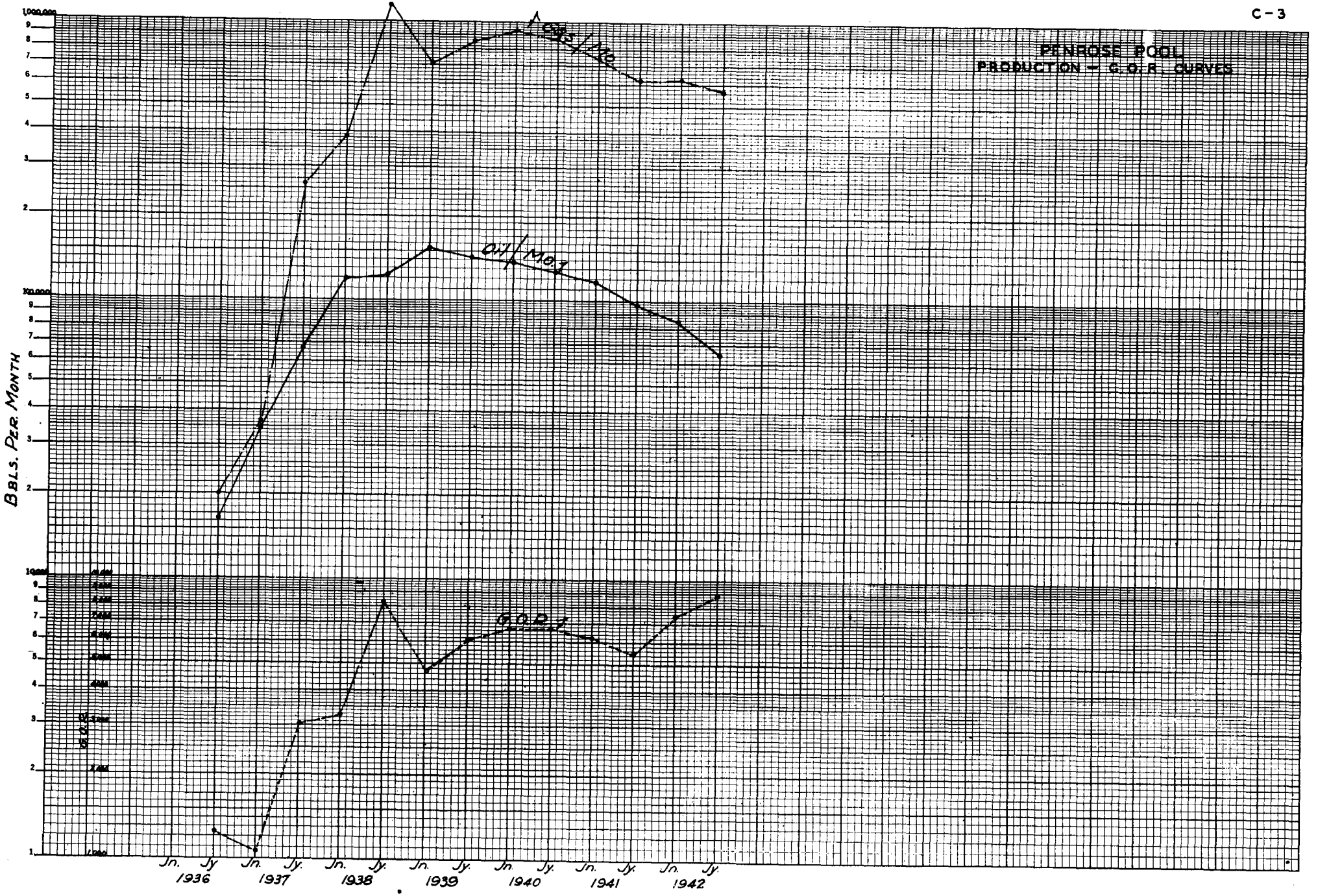
HARDY POOL
PRODUCTION – G.O.R. CURVES



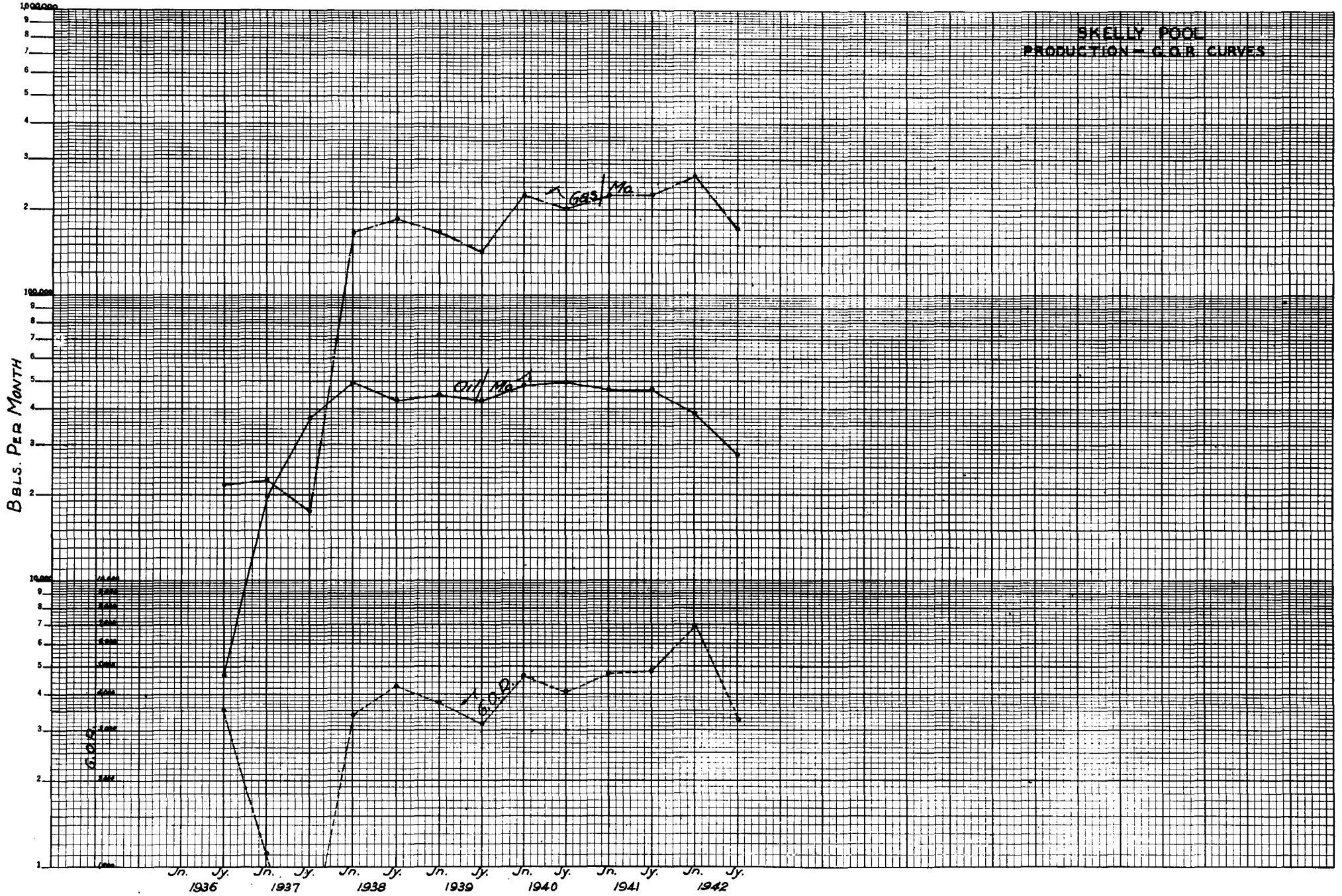
MATTIX POOL
PRODUCTION - G.O.R. CURVES



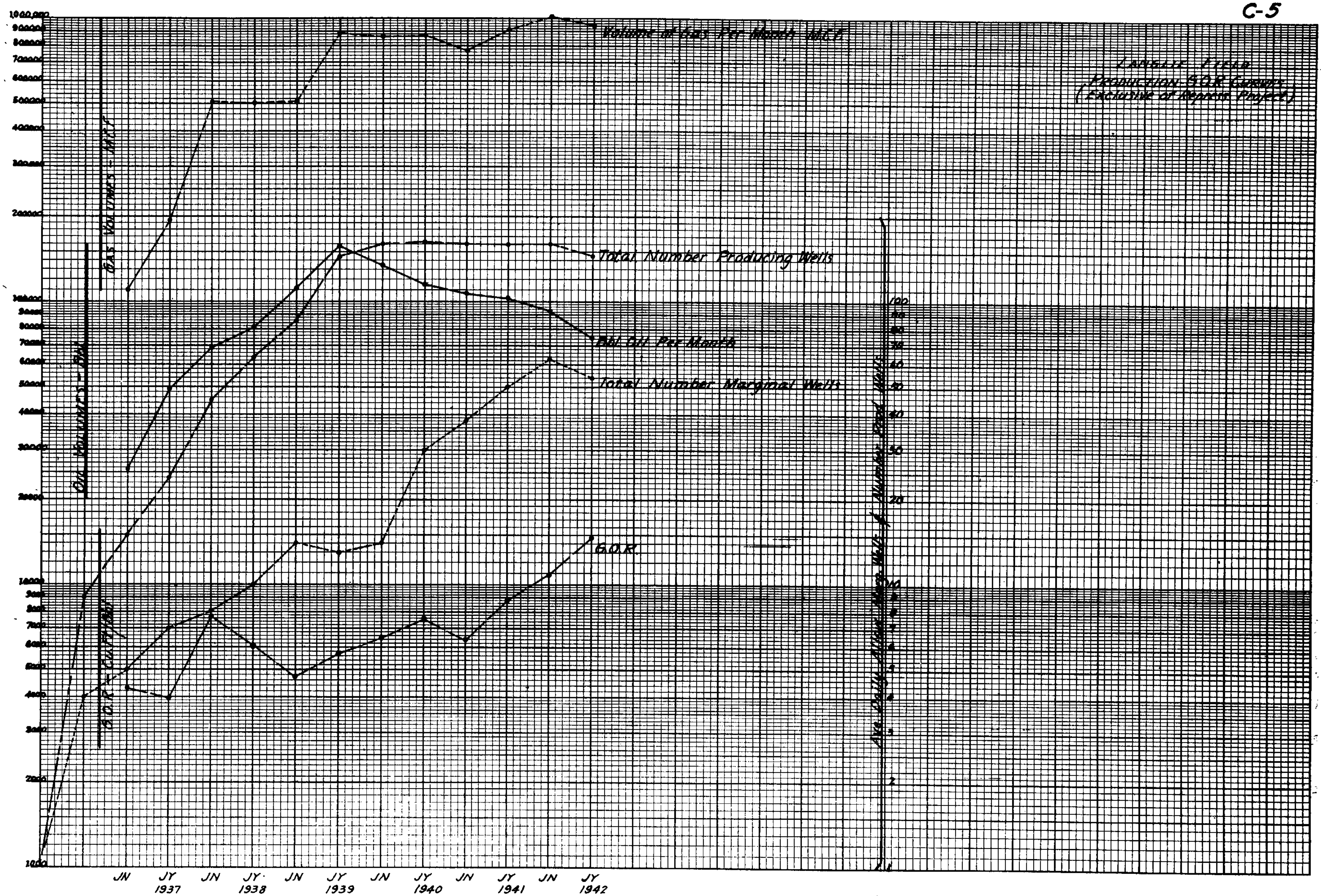
PENROSE POOL
PRODUCTION - G.O.R. CURVES



SKELLY POOL
PRODUCTION — G.O.R. CURVES

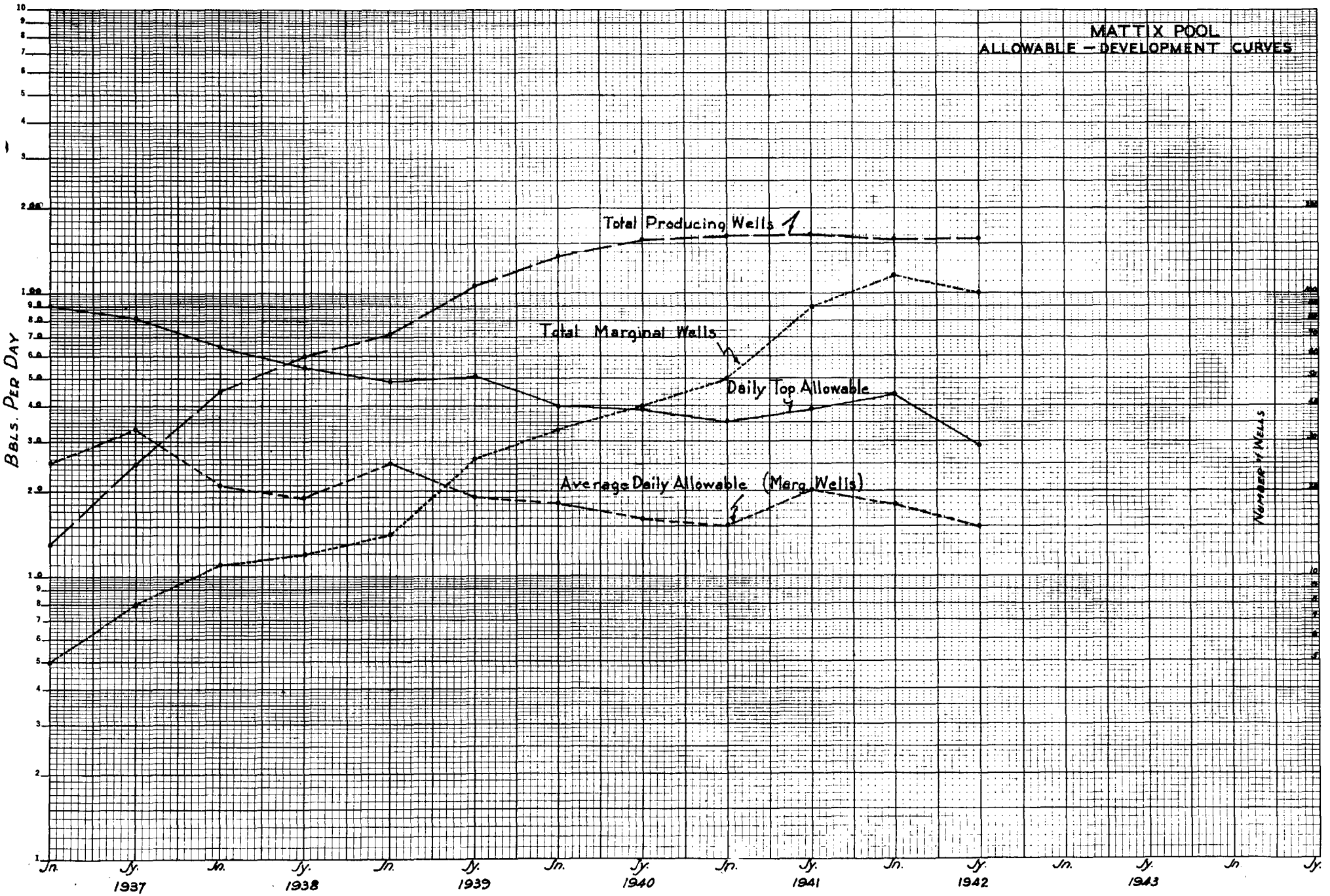


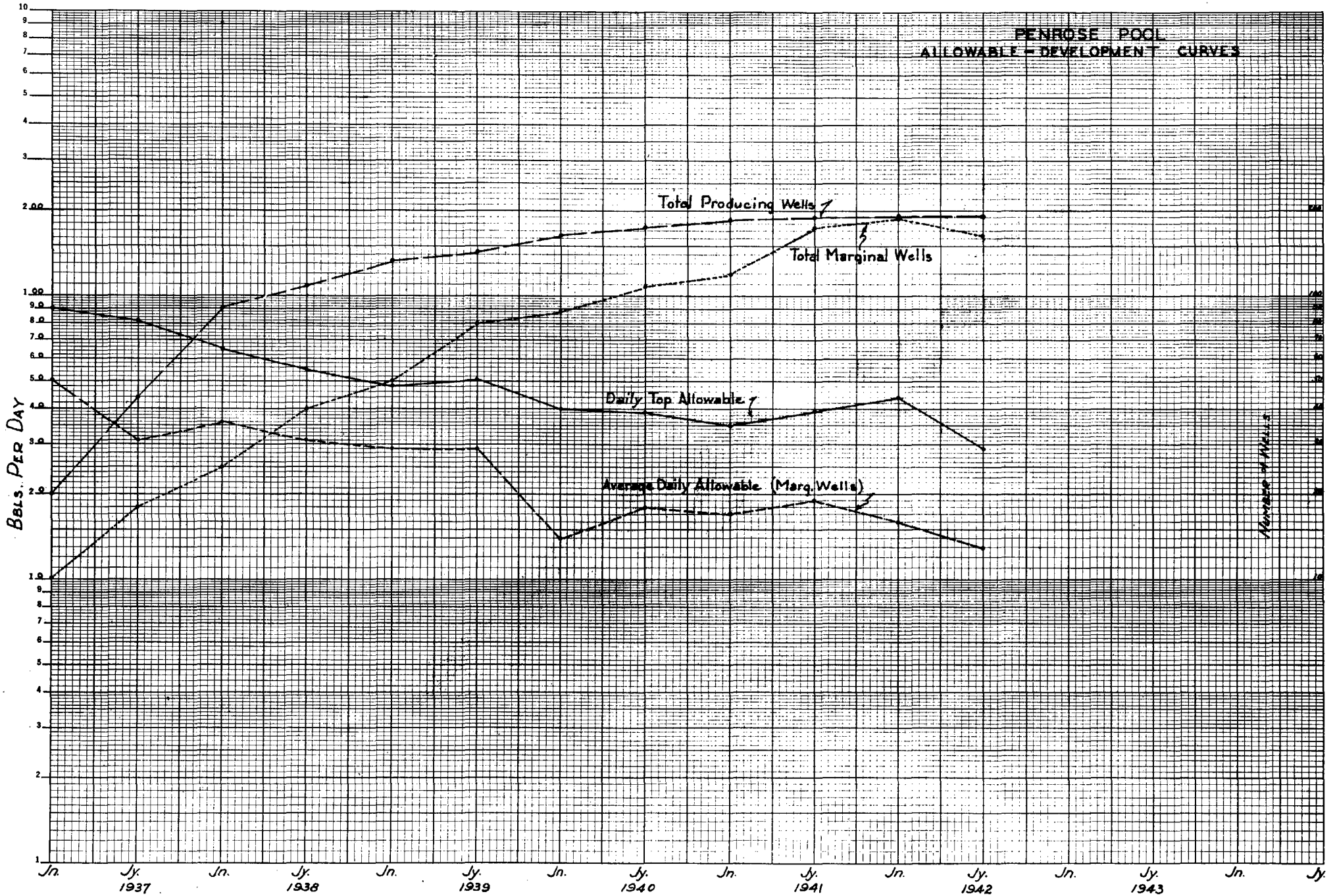
C-5



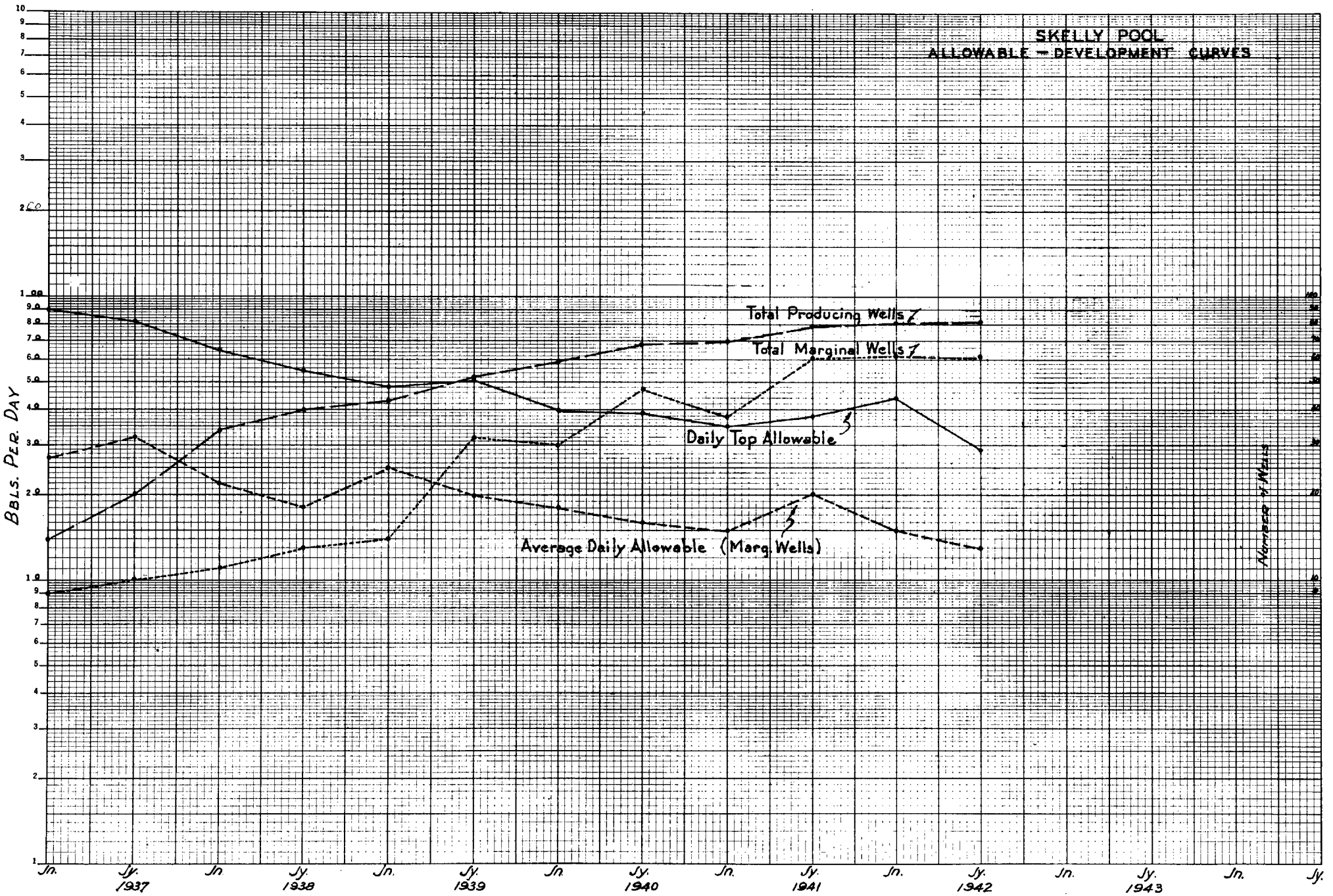
Langlie Field
Production G.O.R. Curves
(Exclusive of Repress Project)
Volume of Gas Per Month MCF
Total Number Producing Wells
Bbl Oil Per Month
Total Number Marginal Wells
G.O.R.
Gas Volumes - MCF
Oil Volumes - Bbl
G.O.R. - Cu Ft/Bbl
Ave Daily Allow Marg Wells & Number Prod Wells
JN JY 1937 JN JY 1938 JN JY 1939 JN JY 1940 JN JY 1941 JN JY 1942

MATTIX POOL
ALLOWABLE – DEVELOPMENT CURVES




PENROSE POOL
ALLOWABLE – DEVELOPMENT CURVES
Total Producing Wells
Total Marginal Wells
Daily Top Allowable
Average Daily Allowable (Marg. Wells)
BBLS. PER DAY
NUMBER OF WELLS
Jn.
Jy.
1937
1938
1939
1940
1941
1942
1943

SKELLY POOL
ALLOWABLE – DEVELOPMENT CURVES



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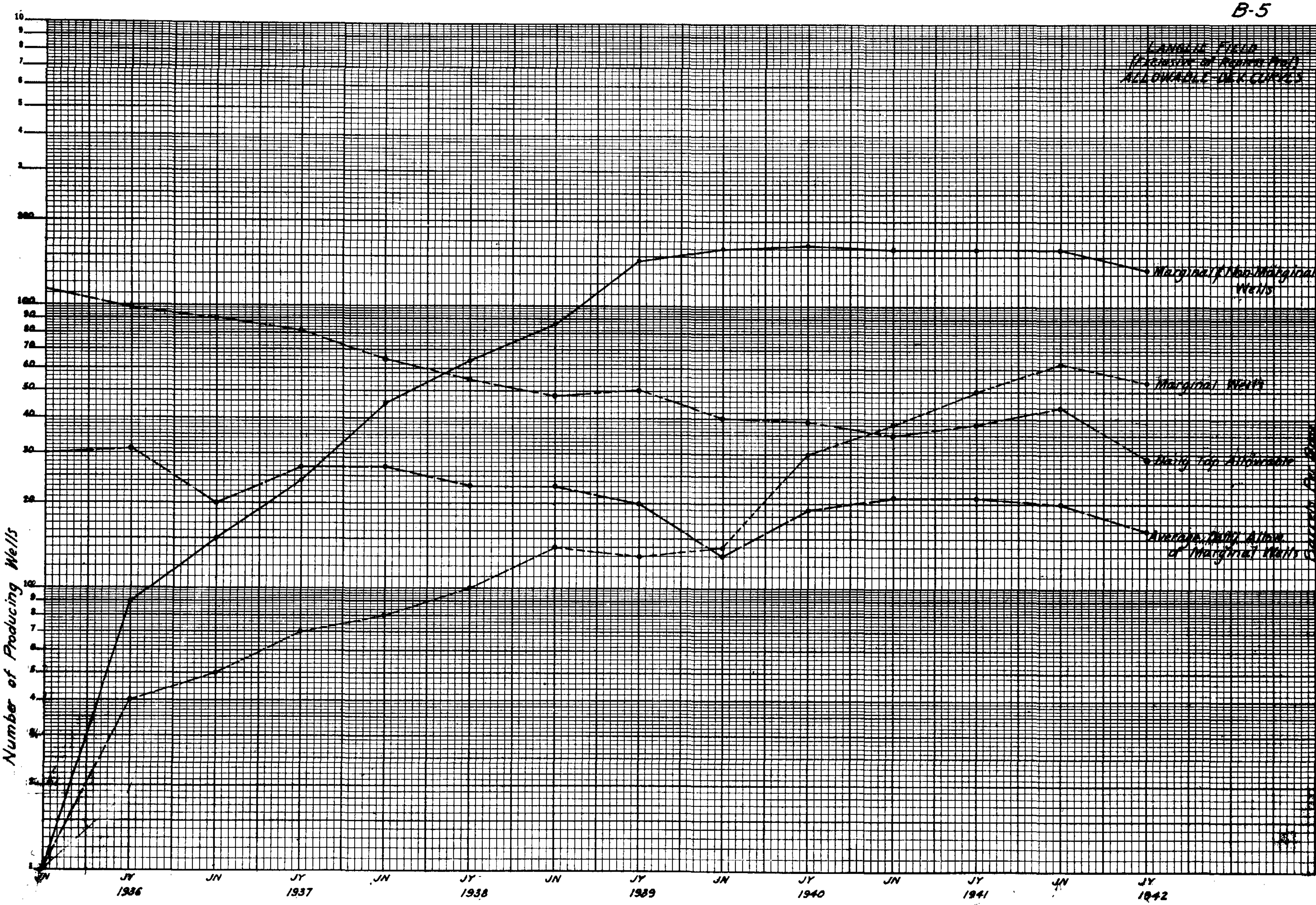
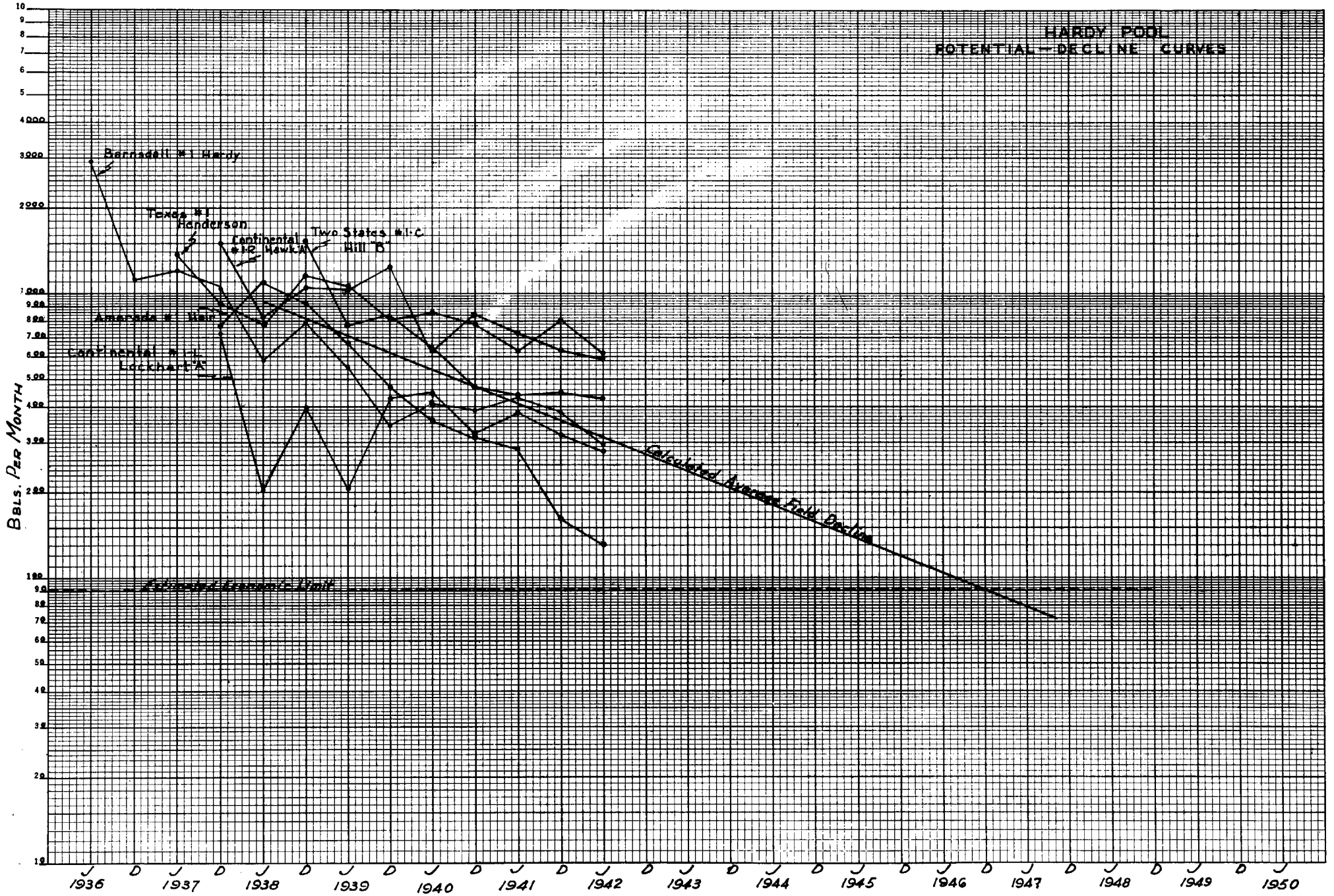
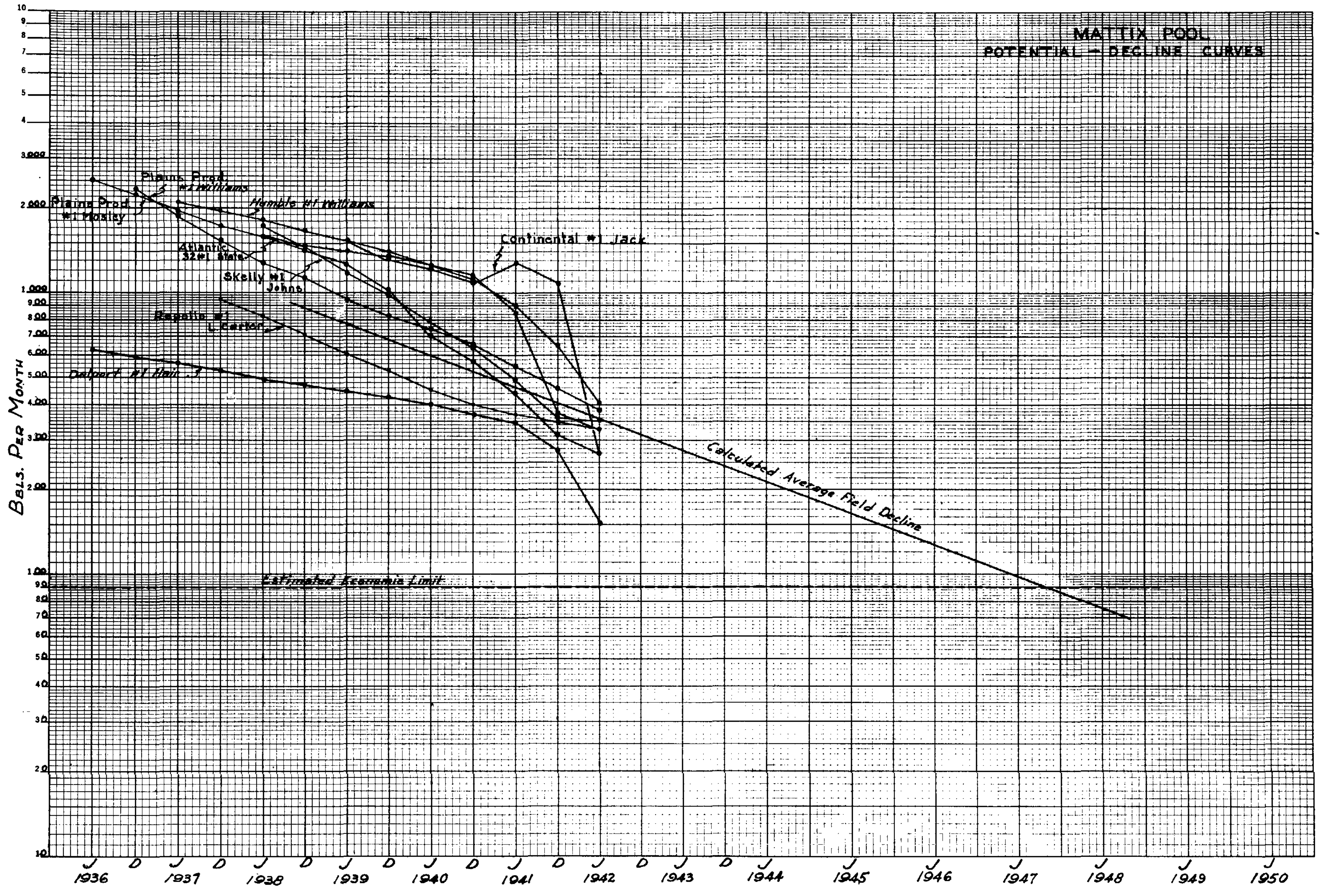
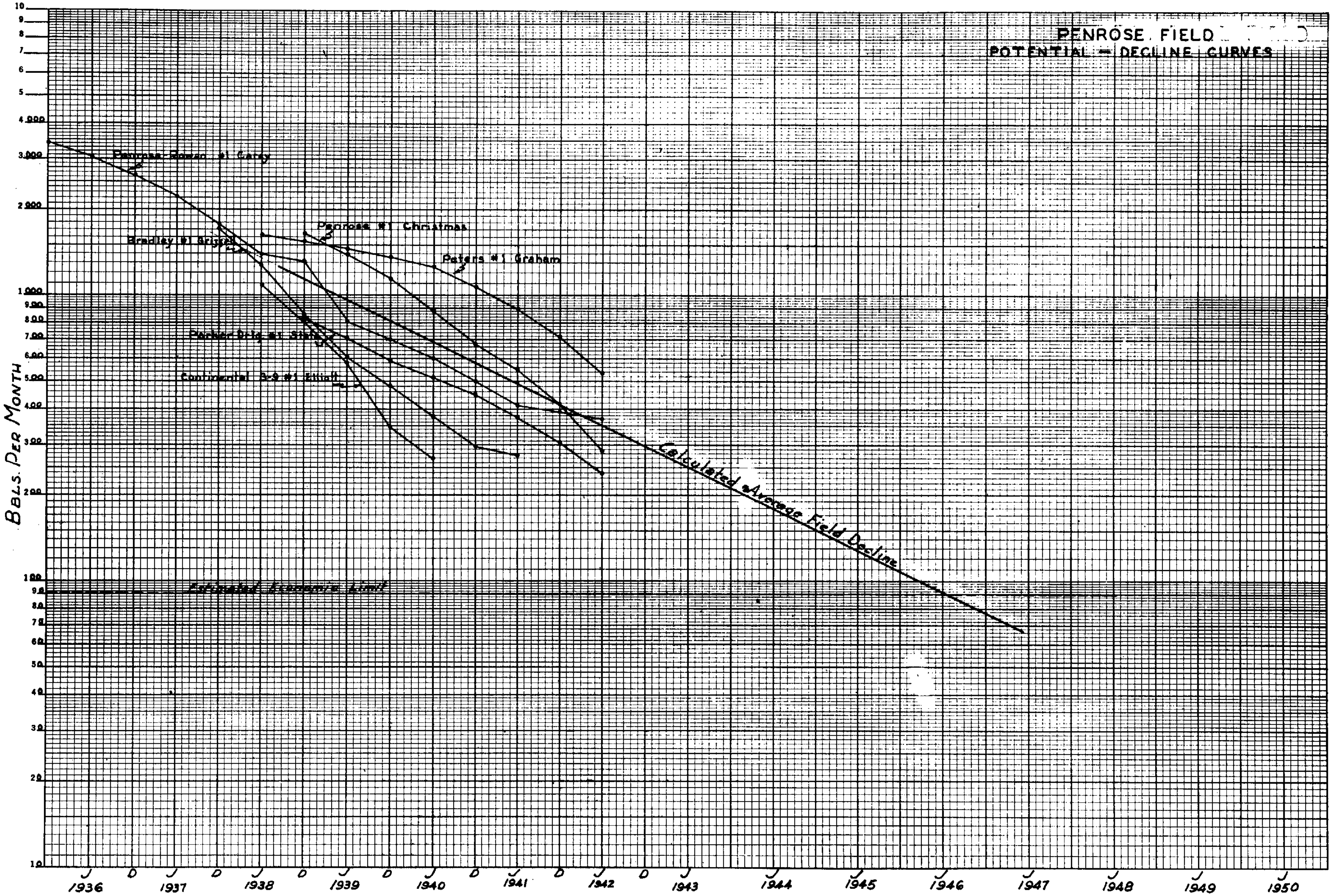


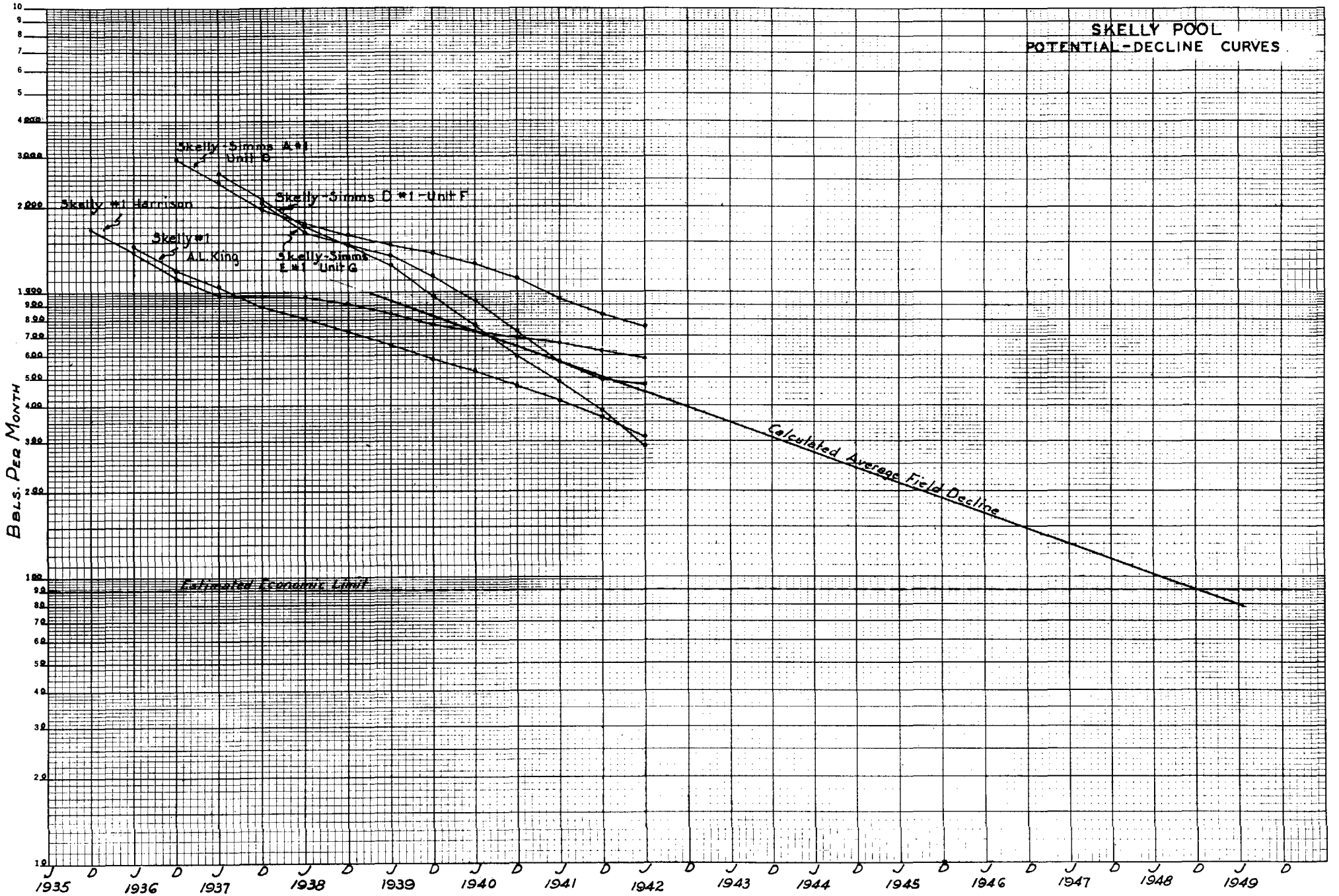
LANGLIE FIELD
Marginal & Non-Marginal Wells
Marginal Wells
Daily Top Allowable
Average Daily Allow. of Marginal Wells
Number of Producing Wells
JN
JY 1936
JN
JY 1937
JN
JY 1938
JN
JY 1939
JN
JY 1940
JN
JY 1941
JN
JY 1942

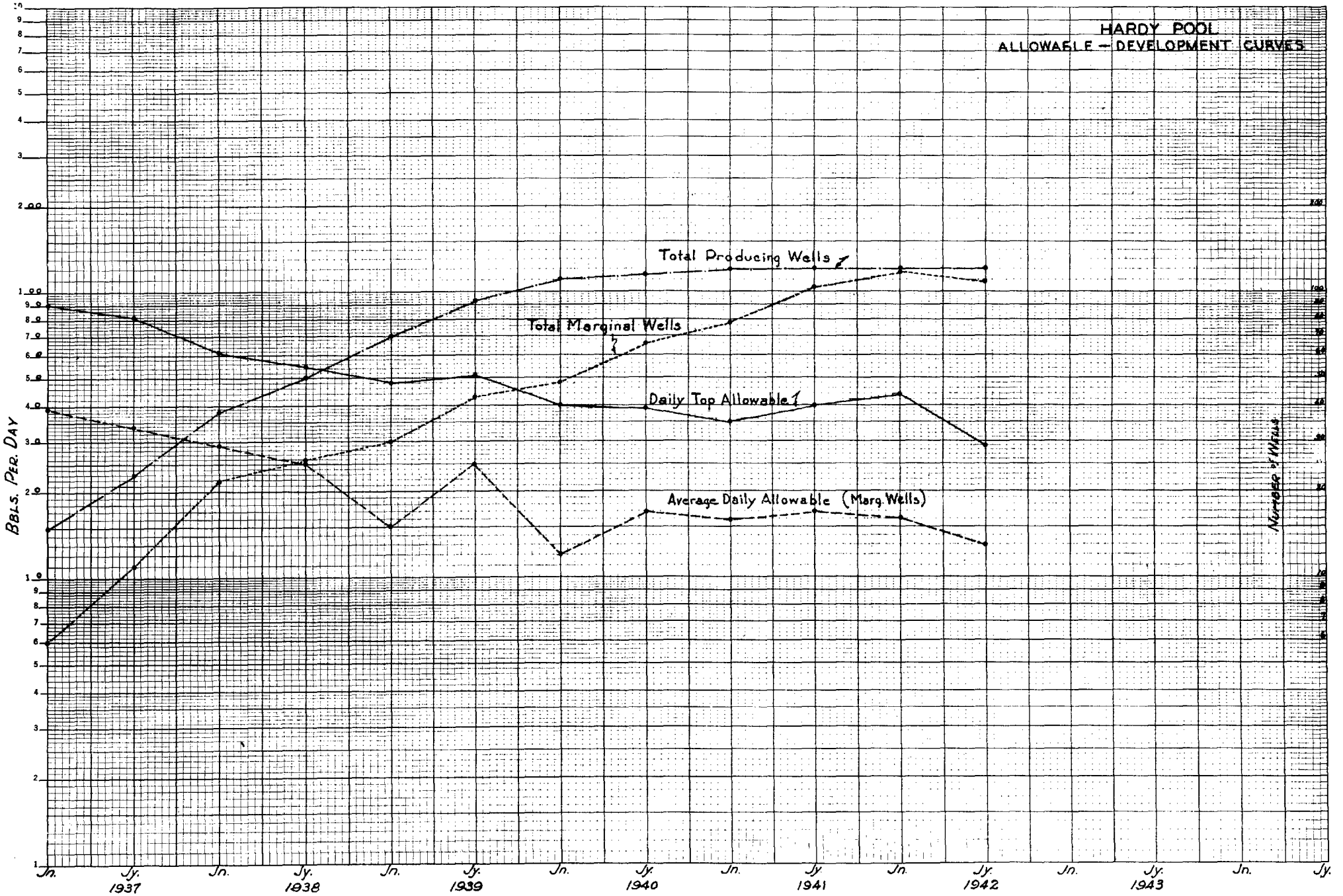

HARDY POOL
POTENTIAL — DECLINE CURVES
BBLS. PER MONTH
Barnsdall #1 Hardy
Texas #1 Henderson
Continental #12 Hawk A
Two States #1-C Hill B
Amerada #1 Blair
Continental #1-L Lockhart A
Calculated Average Field Decline
Estimated Economic Limit
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950


MATTIX POOL
POTENTIAL - DECLINE CURVES
BBLS. PER MONTH
Plains Prod. #1 Williams
Plains Prod #1 Mosley
Humble #1 Williams
Atlantic 32#1 State
Skelly #1 Johns
Continental #1 Jack
Repollo #1 L. Carter
Dalport #1 Hair "J"
Estimated Economic Limit
Calculated Average Field Decline
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950

A-3


PENROSE FIELD
POTENTIAL — DECLINE CURVES
Bbls. Per Month
Penrose Rowan #1 Carey
Bradley #1 Briggs
Penrose #1 Christmas
Peters #1 Graham
Parker Drlg #1 State
Continental B-9 #1 Elliott
Calculated Average Field Decline
Estimated Economic Limit
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950


SKELLY POOL
POTENTIAL-DECLINE CURVES
BBLS. PER MONTH
Skelly-Simms A #1 Unit B
Skelly-Simms D #1 - Unit F
Skelly #1 Harrison
Skelly #1 A.L. King
Skelly-Simms E #1 Unit G
Calculated Average Field Decline
Estimated Economic Limit
10
9
8
7
6
5
4 000
3 000
2 000
1 900
900
800
700
600
500
400
300
200
100
90
80
70
60
50
40
30
20
10
J
D
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949


HARDY POOL
ALLOWABLE — DEVELOPMENT CURVES
Total Producing Wells
Total Marginal Wells
Daily Top Allowable
Average Daily Allowable (Marg. Wells)
BBLS. PER. DAY
NUMBER OF WELLS
Jn.
Jy. 1937
Jn.
Jy. 1938
Jn.
Jy. 1939
Jn.
Jy. 1940
Jn.
Jy. 1941
Jn.
Jy. 1942
Jn.
Jy. 1943
Jn.
Jy.

At a special meeting of the Sub-Advisory and Engineering Advisory Committees of the Lea County Operators Committee held at Midland, Texas on November 24, certain committees were appointed to study various recommendations made at this meeting. One of these committees, composed of W.K. Davis of the El Paso Natural Gas Company, P.D. Grommon of the Texas Company, and E.P. Keeler of the Continental Oil Company, was instructed to study "the adoption of a permanent gas-oil ratio order with changes after study of suggested limiting ratios for various fields." The attached report consists of the recommendations made by this committee.

It was thought advisable to explain the methods used in arriving at the recommended maximum permissible gas-oil ratios for the various Lea County fields. In the case of the more prolific fields such as Hobbs, Monument, and Eunice the maximum ratios were established at a level whereby each field would have approximately the same percentage of high ratio wells. From ten to fifteen percent of the total number of wells in each of these fields will be above the recommended maximum permissible ratios.

In recommending maximum ratios for the sand fields it was found necessary to use a different method. In these fields a large percentage of wells with high ratios would not be penalized because of the small amount of oil they produce. Consequently the percentage of wells had to be considered that would actually be penalized rather than the number of high ratio wells. This system resulted in the setting of maximum permissible ratios in the sand fields that are below the average field ratio while in the better areas the maximum permissible ratios are higher than the field average. However, the percentage of penalized wells in all fields will be fairly constant.

In regard to these sand areas it might be noted that the maximum ratios as recommended by this committee are made with the idea that the present system of applying penalties on a gas withdrawal basis will be continued. The recommended ratios could not be used if this system of computing penalties is changed.

In the case of the Cooper and Jal fields the committee decided that they were unable to set a maximum gas-oil ratio that would be fairly adaptable to all wells in the field. As a result of this decision no maximum ratios were recommended.

The Cooper and Jal fields differ from most other fields in the county in that large quantities of water are produced from most of the wells. There are several wells in these fields that have gas-oil ratios from 20,000 to 50,000 and yet have gas-fluid ratios of less than 1,000. If such wells were penalized it would be necessary to shut them in as they could not be produced at a reduced rate.

In order to avoid this we would be forced to recommend a maximum gas-oil ratio of 50,000 or change to a gas-fluid ratio basis.

Both Jal and Cooper are old fields rapidly approaching depletion. Due to the active water drive the conservation of gas energy would not be as important as in other fields. The present problem is to enable continued production from these wells as long as it is profitable. If a low maximum gas-oil ratio is applied to these fields a large percentage of wells will be shut in and most of the remaining recoverable oil will never be produced. Because of these conditions the committee recommends that no maximum gas-oil ratios be applied to these two fields.

The recommended changes in maximum permissible ratios for the various Lea County fields could be summed up as follows:

1. Two fields, Rhodes and Langlie had their maximum ratios increased.

2. Seven fields, Arrowhead, Eaves, Eunice, Hobbs, Monument, Penrose and Skelly had their maximum ratios reduced.

3. Two fields, Jal and Cooper had no limit set for maximum gas-oil ratios.

E.P. Keeler
W.K. Davis
P.D. Grommon

(Testing Procedure)

All operating gas-oil ratio tests shall be taken by or under the supervision of the New Mexico Oil Conservation Commission hereinafter designated as "The Commission".

1. Operator

The operator shall: Upon request of the Deputy of the Commission, (a) equip each well to make conveniently a gas-oil ratio test; (b) furnish the Deputy of the Commission a complete list of his wells showing the type and dimensions of metering equipment best adapted for accurate gas measurement in accordance with rules contained herein; (c) furnish sufficient and qualified lease labor to install and manipulate all lease equipment in preparation for and during gas-oil ratio tests conducted in accordance with this order.

2. The Commission

The Commission shall: (a) Assemble the information supplied by the operators as recommended above, and arrange test schedules; (b) assign engineers to make tests and act as official witnesses. Only in the event of an emergency shall company engineers beused as official witnesses. (c) instruct all personnel in the proper operation of measuring equipment and procedure in conducting the tests; (d) calibrate all metering equipment; (e) furnish, calculate, record and file all gas measurement charts and records; (f) compute all gas-oil ratios.

3. Official Witness

The official witness shall take such action as may be necessary to accomplish the desired purpose.

4. Manner of Testing

(a) The flow period shall be 48 hours, except as hereinafter stated. The first 24 hours shall be the stabilization period and the last 24 hours shall be the period during which the well is tested.

(b) Oil shall be guaged at the beginning and ending of each 24 hour period and gas shall be measured during the period wherein the well is tested. No change in the rate of flow shall be made during the last 36 hours of the 48 hour flowperiod and said flow shall approach as nearly as possible the unadjusted current allowable rate.

(c) Should an operator elect to flow a well at a rate less than the unadjusted current allowable then, and in that event, the rate of flow for proration purpose on said wells shall not exceed the rate at which the gas-oil ratio test was made.

(d) In case of a stio-cocked well, the oil and gas shall be measured for the time it is produced.

(e) 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.

5. Liquid Measurements

(a) All tanks shall be guaged and total volume of fluids determined according to accepted oil field practice.

(b) The net volume of oil shall be the total volume of fluid less the volume of B.S.& W.

(c) Fluid level in the separator must be maintained relatively

constant so that the oil dump valve is covered at all times by at least 12 inches of liquid.

(d) If it is necessary to use a flowtank for the separation of water the water-oil level must bethe same at the beginning and end of the test.

6. Gas Measurement

(a) A 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 pounds a recording pressure gauge shall be installed on the separator and the measured gas shall be increased by the measured or calculated volumegoing to the tanks. Calculated volume shall be based on the gas-solubility versus pressure curves for the field or area in which the well is located.

(b) For computing the volume of all gas produced the following standards shall be used: Pressure - 10 ounces above an atmospheric pressure of 14.4 pounds per square inch; temperature - 60 degrees Fahrenheit; specific gravity - 0.85 as compared to air. In case the gas measurement is made at a pressure in excess of 100 pounds, the measurements shall be adjusted in accordance to deviation from Boyles Law. The gas volumes shall be computed in cubic feet and gas-oil ratios in cubic feet per barrel of oil.

(c) Orifice well testers, orifice meters and side pressures 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 meters. 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 Commission for special consideration and rules.

8. The gas-oil ratio of a unit, regardless of the number of wells thereon, as applied in thisorder, 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 does not, during the standard gas-oil ratio test, produce the acreage allowable for the pool in which the unit is located.

(b) The unadjusted allowable of a marginal unit shall be the amount of oil produced during the standard gas-oil ratio test.

10. The unadjusted allowable of a non-marginal unit is the amount of oil it would receive before the gas/oil ratio adjustment had been applied.

11. A standard gas/oil ratio test shall be made on any well or unit at the discretion of the Commission whenever a written request is submitted to the Commission by any operator in the pool in which the well or unit is located. Tests may be made on any wells selected by the Commission for any reason whatsoever.

12. The effective date of all gas-oil ratio tests shall be the first day of the next succeeding monthly proration period. The Commission must be notified that the well or unit is ready for testing at least five days before the beginning of such proration period.

13. The oil allowable of each well or unit producing with a gas/oil ratio in excess of the maximum provided for the pool or area in which the well or unit is located shall be adjusted as hereinafter provided. ~~Such maximum gas/oil ratios for each pool or area in~~ and as set out in the limiting orders.

Lea County as follows:

4

POOL OR AREA	MAXIMUM GAS-OIL RATIO
Arrowhead	3,500
Corbin	2,000
Eaves	4,000
Eunice	6,500
Halfway	2,000
Hardy	5,000
Hobbs	2,500
Langlie	8,000
Lynch	2,000
Lynn	5,000
Maljamar	4,000
Mattix	7,000
Monument	4,000
N. Lynch	2,000
N. Maljamar	4,000
Penrose	5,000
Rhodes	5,000
Skaggs	5,000
Skelly	5,000
S. Eunice	7,000
S. Levington	2,000
S. Maljamar	2,000
Vacuum	2,000
W. Eunice	2,000
New and Undesignated Pools	2,000

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 newpool, whichever occurs first.

14. The application of the gas-oil ratio adjustment shdl be as follows:

(a) The oil allocation shall be distributed to the various pools in the same manner used prior to December 1, 1942.

(b) In each pool, except Hobbs and Monument, thetotal 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 amount of oil determined to have been excessively assigned to wells subject to gas-oil ratio adjustment shall be redistributed 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 because of high gas-oil ratio, shall not exceed its adjusted 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 theproduct of the permitted maximum gas-oil ratio and its adjusted oil allowable. From the pool allocation shall be deducted the amount of oil allocated to marginal wells and wells adjusted forhigh-gas oil ratio. The remaining oil shall be distributed to the remaining unadjusted wells in accordance with the pool proration plan.

(15) The method of applying penalties for high-gas oil ratio units shall be as follows:

(a) Any oil producing unit with a net gas-oil ratio in excess of the assigned maximum for the field in which it is located shall be allowed to produce that amount of oil obtained from the following formula:

$$\text{Penalized Allowable} = \frac{\text{Maximum Permissible GOR}}{\text{GOR of Unit}} \times \text{Unit Top Allowable Oil Production for Field}$$

The use of thisformula results in penalizing on a method of volumetric control where all units in one particular field are allowed to produce an equal quantity of gas.

(b) A marginal well shall be permitted to produce the same total volume of gas which it would be permitted to produce, if it were a non-marginal well.

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.

In order to encourage repressuring or the maintenance of reservoir pressure, the volume of gas injected into the reservoir may be deducted from the putput 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.

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

18. Units designated by the Commission as predominately gas shall be exempt from gas-oil ratio adjustments. Provided, however, that no unit shall be allowed to produce more oil than the average top allowable of a unit for the county in which it is located.

19. In all cases where gas is sold, the gas volumes reported on State Form C-115 shall agree with those furnished by individual gasoline plants. In those cases where the entire gas volume from a unit is sold, the gas-oil ratio of this unit, as reported on Form C-115 may be used as the basis for penalties. Those units producing gas to air shall be tested by a representative of the Commission and penalties on such wells based on these official tests rather than on the ratios reported on Form C-115.

Fields in Lea County New Mexico which are, within this report, considered to have made the nearest approach of any to depletion are:

1. Sand Pay types
   a. Hardy
   b. Mattix
   c. Penrose
   d. Skelly
2. Dolomitic limestone pay type
   a. Cooper
   b. Jal
   c. Lyhn

Monthly production decline curves which show the calculated average field decline for the Hardy Field (Graph A-1); the Mattix Field (Graph A-2); the Penrose Field (Graph A-3) and the Skelly Field (Graph A-4) reflect the future recoverable oil (depleted to a monthly rate of 90 barrels) from these fields. The figures obtained are as follows:

FIELD	FUTURE RECOVERABLE OIL PER ACRE (BBL)	FUTURE RECOVERABLE OIL PER 40 ACRES
Hardy	163	6520 bbls.
Mattix	216	8640
Penrose	158	6320
Skelly	346	13840

Average per acre recovery for each of the above listed fields, and its age as of July 1, 1942 is as follows:

FIELD	PER ACRE RECOVERY TO 7-1-42	AGE OF FIELD AS OF 7-1-42
Hardy	882 bbls.	6½ yrs.
Mattix	1055 "	7 "
Penrose	974 "	6½ "
Skelly	883 "	6½ "

The calculated ultimate recovery from these fields, based upon the foregoing tabulations is as follows:

FIELD	TOTAL PER ACRE RECOVERY
Hardy	1045 bbls.
Mattix	1271 "
Penrose	1132 "
Skelly	1229 "

Although reservoir pressure data on the above listed fields is not as complete as can be desired, that which is available shows an average decline of 900 pounds to date with an average reservoir pressure of 500 pounds remaining.

Reservoir conditions within the Mattix Field are believed to be representative of those in the other three sand fields being considered. Therefore, a condition within the field can be accepted for the others.

Calculations show that within the Mattix Field 83 percent of ultimate oil recovery has been obtained with 68 percent of the effective reservoir pressure drop.

Production - Gas-oil ratio curves of the Hardy Field (Graph C-1), the Mattix Field (Graph C-2), the Penrose Field (Graph C-3) and the Skelly Field (Graph C-4) show, with exception of the Skelly Field, a definite downward trend in the total volume of gas being produced although gas-oil ratios are increasing. Such condition suggests a much more rapid depletion of oil than gas and when considered in light of the fact that, as stated above, 83 percent of the ultimate oil recovery has been made with 68 percent of the effective reservoir pressure, it leads to the question as to whether or not the rate of gas production and corresponding reservoir pressure drop will materially affect ultimate recovery of oil.

The ability of each field to produce is reflected graphically by allowable development curves on the Hardy Field (Graph B-1), Mattix Field (Graph B-2), Penrose Field (Graph B-3) and Skelly Field (Graph B-4). These curves show the continuous decline of the daily top allowable per well; the average daily allowable per marginal well and the rapidly approaching marginal condition of all the sand fields.

A tabulation is presented herewith to show the relationship of water to total fluid produced to date in each of the sand fields.

JULY 1, 1942

	TOTAL OIL	TOTAL WATER	TOTAL FLUID	% OF WATER TO TOTAL FLUID
Hardy	4,232,924	34,066	4,266,990	0.7
Mattix	6,581,969	127,647	6,709,616	1.9
Penrose	7,362,993	73,507	7,436,500	0.98
Skelly	2,895,123	45,104	2,940,227	1.53
			Ave.	1.27

Estimated average field reservoir pressure drop = 900 pounds

The relationship of water produced to total fluid together with consideration of the reservoir pressure drop justifies the opinion that the sand fields are dominantly volumetric drive reservoirs.

An exact count of the number of sand field wells which have been shot is not readily available. However, it is believed that 75 percent of total completions is a conservative estimate.

In as much as calculations have shown that 17 percent of the future recoverable oil can be produced by 32 percent of the effective remaining reservoir energy, it is apparent that a surplus of flowing energy exists. However, it is also apparent that the future recoverable oil is so small that the expenditure necessary for remedial work in pay sections that have been shot is not economically justified.

If, as stated above, the relationship of water produced to total fluid together with consideration of reservoir pressure drop can be used as a means of identifying the type of reservoir drive within a field it is then evident, as shown by the following tabulation, that the Cooper, Jal and Lynn dolomitic-limestone fields are dominantly hydrostatic drive reservoirs.

SEPTEMBER 1, 1942

	TOTAL OIL	TOTAL WATER	TOTAL FLUID	% WATER TO TOTAL FLUID
Cooper	13,691,315	116,458,927	130,150,242	89.48
Jal	4,189,609	34,487,648	38,677,257	89.16
Lynn	1,543,440	3,154,340	4,697,780	67.14
			Ave.	81.92

Estimated average field reservoir pressure drop = 150 pounds

Production- Development curves on the Cooper Field (Graph D-1) the Lynn Field (Graph D-2) and the Jal Field (Graph D-3) show the rapid rate of increase of water during the early lives of the dolomitic-limestone fields. Such an increase possibly reflects the inability of operators to segregate, by remedial work, water from the oil.

A tabulation is herewith presented to show water and oil production per well per year in the three dolomitic-limestone fields.

I N D E X

Mr. A.M. McCorkle
Chairman Lea County Operators' Committee
Stanolind Oil & Gas Co.
Ft. Worth, Texas

Dear Sir:

Submitted herewith is a compilation of reports by the committees listed below which were appointed at a meeting of the Subadvisory Executive Committee and the Engineering Advisory Committee at Midland, November 24:

Committee No. 1: Ken Davis- El Paso Natural Gas Co.
P.D. Grommen - The Texas Co.
Ed Keeler - Continental Oil Co.

To study a permanent gas-oil ratio order and give suggested limiting gas-oil ratios for the various fields of Lea County.

Committee No. 2: C.P. Miller - Lea County Operators Committee
W.D. Mitchell - Gulf Oil Corp.
G.H. Gray - Repollo Oil Co.

Which was appointed to prepare material supporting the contention that no beneficial action is practicable in the older fields of Lea County which are nearing depletion.

Committee No. 3: Don Topper - Amerada Pet. Corp.
L.L. Gray - Gulf Oil Corp.
Representative - Phillips Pet. Co.
S.V. McCollum - Continental Oil Co.
R.S. Dewey - Humble Oil & Rfg. Co.

Which, after study, was to submit a definite plan indicating the effect of using a transfer of allowable plan in Monument and Eunice Pools.

The various reports present considerable detailed information. Of especial interest are the following:

A suggested gas-oil ratio order is presented which recommends revised maximum limiting ratios for the fields of Lea County, the principal changes from present values being several reductions. No provision has been made in the suggested order for the granting of exceptions to it.

Considerable pertinent data is presented supporting the contention that certain fields of Lea County nearing depletion cannot be materially or economically benefited by remedial work or the imposition of drastic gas-oil ratios, limitations which would result in greatly curtailled production.

The heading of this report is in error in that it reads "fields having depletion" and should read "fields nearing depletion".

The report indicates that 12,738,000 cubic feet per day would be saved in Monument and Eunice alone if exemptions of the present gas-oil ratio order in those fields were cancelled. This figure cannot be taken as absolutely accurate but is a general approximation.

The report also analyzes the effect of a possible "transfer of allowable plan" covering Monument and Eunice, whereby the allowables from high ratio wells would be transferred to lower ratio wells on units not exceeding 320 acres in size, and under

the same basic lease. In the plan as worked out, the intention is to transfer the total unpenalized allowable rather than any percentage of it. Under these conditions, it is estimated that there would be a saving at Monument of 5,517,000 cubic feet per day and at Eunice of 11,349,322 cubic feet per day.

Maps have been prepared graphically giving information concerning the distribution of water wells, marginal wells, one and two unit leases and the location of the high gas-oil ratio wells. Because of the nature of the exhibits, they cannot be readily duplicated but will be made available at any of the operators' meetings and hearings which may be held.

Engineering studies are going forward on two "transfer of allowable" experimental projects, one each at Monument and Eunice, and data will be available before the time of the proposed hearing on both of these.

Glenn Staley,
Chairman

Mr. A.M. McCorkle,
Chairman Lea County Operators Committee
Stanolind Oil & Gas Co.
Ft. Worth, Texas

Dear Sir:

Submitted herewith is a compilation of reports by the Committees listed below which were appointed at a meeting of the Sub-Advisory Executive Committee and the Engineering Advisory Committee at Midland November 24, 1942; also reports by the Committee appointed on January 26, 1943 by the Lea County Operators Committee to work out, from an engineering standpoint, reasons for all limiting gas-oil ratios in excess of 2000 cu/ft. per barrel for various fields of Lea County.

Committee No. 1 Ken Davis - El Paso Natural Gas Co.
P.D. Grommon, Jr. - The Texas Co.
Ed Keeler - Continental Oil Co.

Assignment: To study a permanent gas-oil ratio order and give suggested limiting gas-oil ratios for the various fields of Lea County.

Committee No. 2 C.P. Miller - Lea County Operators Committee
W.D. Mitchell - Gulf Oil Corp.
G.H. Gray - Repollo Oil Co.

Assignment: To prepare material supporting the contention that no beneficial action (from remedial work) is practicable in the older fields of Lea County, which are nearing depletion.

Committee No. 3 Don Topper - Amerada Petroleum Corp.
L.L. Gray - Gulf Oil Corp.
R.L. O'Neil - Phillips Pet. Co.
S.V. McCollum - Continental Oil Co.
R.S. Dewey - Humble Oil & Rfg. Co.

Assignment: To submit a definite plan indicating the effect of using a transfer of allowable plan in Monument and Eunice Fields.

Committee No 1 & 2 combined: Kenneth Davis - El Paso Natural Gas Co.
George Gray - Repollo Oil Co.
W.D. Mitchell - Gulf Oil Corp.
P.D. Grommon Jr. - The Texas Co.
C.P. Miller - Lea County Operators Committee

Assignment: To work out, from an engineering standpoint, reasons for all limiting gas-oil ratios in excess of 2000 cu/ft. per barrel of oil for the various fields of Lea County not covered by committees previously named.

The various reports present considerable detailed information. Of especial interest are the following:

A suggested gas-oil ratio order is presented by Committee No. 1 which recommends revised maximum limiting ratios for the fields of Lea County, the principal changes from present values being several reductions. No provision has been made in the suggested order for the granting of exceptions to it.

Considerable pertinent data is presented by Committee No. 2 supporting the contention that certain fields of Lea County nearing depletion cannot be materially or economically benefited by remedial work or the imposition of drastic gas-oil ratios, limitations which would result in greatly curtailed production.

The report of Committee No. 3 indicates that 12,738,000 cubic feet per day would be saved in Monument and Eunice alone if exemptions of the present gas-oil ratio order in those fields were cancelled. This figure cannot be taken as absolutely accurate but is a general approximation.

The report also analyzes the effect of a possible "transfer of allowable plan" covering Monument and Eunice, whereby the allowables from high ratio wells would be transferred to lower ratio wells on units not exceeding 320 acres in size, and under the same basic lease. In the plan as worked out, the intention is to transfer the total unpenalized allowable rather than any percentage of it. Under these conditions, it is estimated that there would be a saving at Monument of 5,517,000 cubic feet per day and at Eunice of 11,349,322 cubic feet per day.

Maps have been prepared graphically giving information concerning the distribution of water wells, marginal wells, one and two unit leases and the location of the high gas-oil ratio wells. Because of the nature of the exhibits, they cannot be readily duplicated but will be made available at any of the operators' meetings and hearings which may be held.

Engineering studies are going forward on three "transfer of allowable" experimental projects, one at Monument and two at Eunice, and data will be available before the time of the proposed hearing on both of these.

Glenn Staley,
Chairman

Proposal B. By using a stringent gas-oil ratio penalty on true displacement basis with no exceptions, no further transfer of allowables would be needed.

4. All studies mentioned above be expedited with a view of having a hearing before January 1, 1943.

Each recommendation was discussed separately and voted upon in that same manner. Results of such vote are as follows:

No. 1. Recommendation carried.
No. 2. Recommendation carried.
No. 3. Proposal A. Recommendation carried; 6 vote yes; 1 no. Vote held as to whether to use one field only (Eunice) as experimental field or Eunice and Monument. Vote carried 5 to 2 in favor of Eunice and Monument.

A committee consisting of the following was appointed to study Recommendation No. 1:

Ken Davis - El Paso Natural Gas Co.
P.D. Grommon - The Texas Co.
Ed Keeler - Continental Oil Co.

A committee consisting of the following was appointed to study Recommendation No. 2:

C.P. Miller - Lea County Operators Committee
W.D. Mitchell - Gulf Oil Corp.
G.H. Gray - Repollo Oil Co.

A committee was then appointed for studying and proposing the experimental work to be done in the Eunice and Monument Fields with regard to transfer of allowable from high gas-oil ratio wells to low gas-oil ratio wells. Members of this committee are as follows:

Don Topper - Amerada Pet. Corp.
L.L. Gray - Gulf Oil Corp.
Representative - Phillips Pet. Co.
S.V. McCollom - Continental Oil Co.
R.S. Dewey - Humble Oil & Rfg. Co.

It was decided that these committees would meet in Hobbs in the near future, after which their report would be sent to Mr. A.M. McCorkle, Chairman of the Executive Committee of the Lea County operators, who, in turn would submit the information to the members of the Executive Committee. This Committee will then petition the Oil Conservation Commission for a hearing on the matter. It has been suggested that this hearing be held in Santa Fe on December 17, if possible. An operators meeting will be held December 16 in Santa Fe.

The question was brought up of using gasoline plant figures on Operators Monthly Report of Operations C-115 instead of company figures. Mr. Willig of The Texas Company made a motion that the group present recommend that the operators be notified of the conditions and ask for their cooperation in making their gas figures coincide with figures they receive from the gasoline plant; that they adopt that method of reporting gas-oil ratios on form C-115. Motion was seconded by Mr. Moore and carried.

H.J. Kemler
SUB-ADVISORY COMMITTEE
Glenn Staley
ENGINEERING ADVISORY COMM.

MINUTES OF SUB-ADVISORY & ENGINEERING ADVISORY COMMITTEES
Midland, Texas
November 24-1942

A special meeting of the Sub-Advisory and Engineering Advisory Committees of the Lea County Operators Committee was held in Midland, Texas, November 24 at the Scharbauer Hotel at 10 A.M. The following men were present:

Edgar Kraus	Atlantic Rfg. Co.	Carlsbad, N.M.
G.H. Card	Stanolind Oil & Gas Co.	Ft. Worth, Texas
G.H. Gray	Repollo Oil Co.	Midland, Texas
H.E. Berg	Tidewater Assoc. Oil Co.	"
N.B. Larsh	Repollo Oil Co.	"
D.A. Jordan	Atlantic Rfg. Co.	"
J.H. Moore	Shell Oil Co., Inc.	Hobbs, N.M.
J.W. House	Humble Oil & Rfg. Co.	Midland, Texas
W.D. Mitchell	Gulf Oil Corp.	Hobbs, N.M.
W.K. Davis	El Paso Natural Gas Co.	Jal, N.M.
R.S. Dewey	Humble Oil & Rfg. Co.	Midland, Texas
P.D. Grommon, Jr.	The Texas Co.	"
R.W. O'Neill	Phillips Pet. Co.	Odessa, Texas
H.L. Johnston	Continental Oil Co.	Ft. Worth, Texas
H.J. Kemler	Shell Oil Co., Inc.	Midland, Texas
J.N. Dunlavey	Skelly Oil Co.	Hobbs, N.M.
James Fitzgerald, Jr.	Skelly Oil Co.	Midland, Texas
L.F. Shiplet	The Texas Co.	"
A.E. Willig	"	Ft. Worth, Texas
Ed Warren	Carl B. King	Midland, Texas
H.W. Deax	Amerada Pet. Corp.	"

Mr. E.A. Wahlstrom of the Goldsmith Pool Engineering Committee explained in detail the "Goldsmith Plan" of transferring allowables from high gas-oil ratio wells to low ratio wells. Mr. Wahlstrom pointed out that the plan has worked very successfully; much more so than a lot of repair jobs that were tried. This plan was discussed with the idea of trying it in some of the fields south of Hobbs in Lea County Eunice and Monument being especially considered. A committee of five men was appointed to study the problems of the high gas-oil ratio situation in Lea County Fields, and if possible, present suggestions as to how the situation might be remedied. This committee was asked to report back to the meeting later in the afternoon; members of this committee are:

R.S. Dewey	Edgar Kraus	W.D. Mitchell
J.H. Moore	A.E. Willig	

The report of the committee was as follows:

1. Recommend adoptions of permanent gas-oil ratio order with changes, after study, of suggested limiting ratios for various fields.

   a. Such order to provide for no exceptions.

2. Prepare material for presentation supporting contention that no beneficial action is practicable in older fields nearing depletion.

3. Proposal A. Ask for permission to use transfer of allowable plan in one field in Lea County on experimental basis for one year. After brief study, a specific plan be presented indicating desirable transfers and conditions under which experiment should be made.