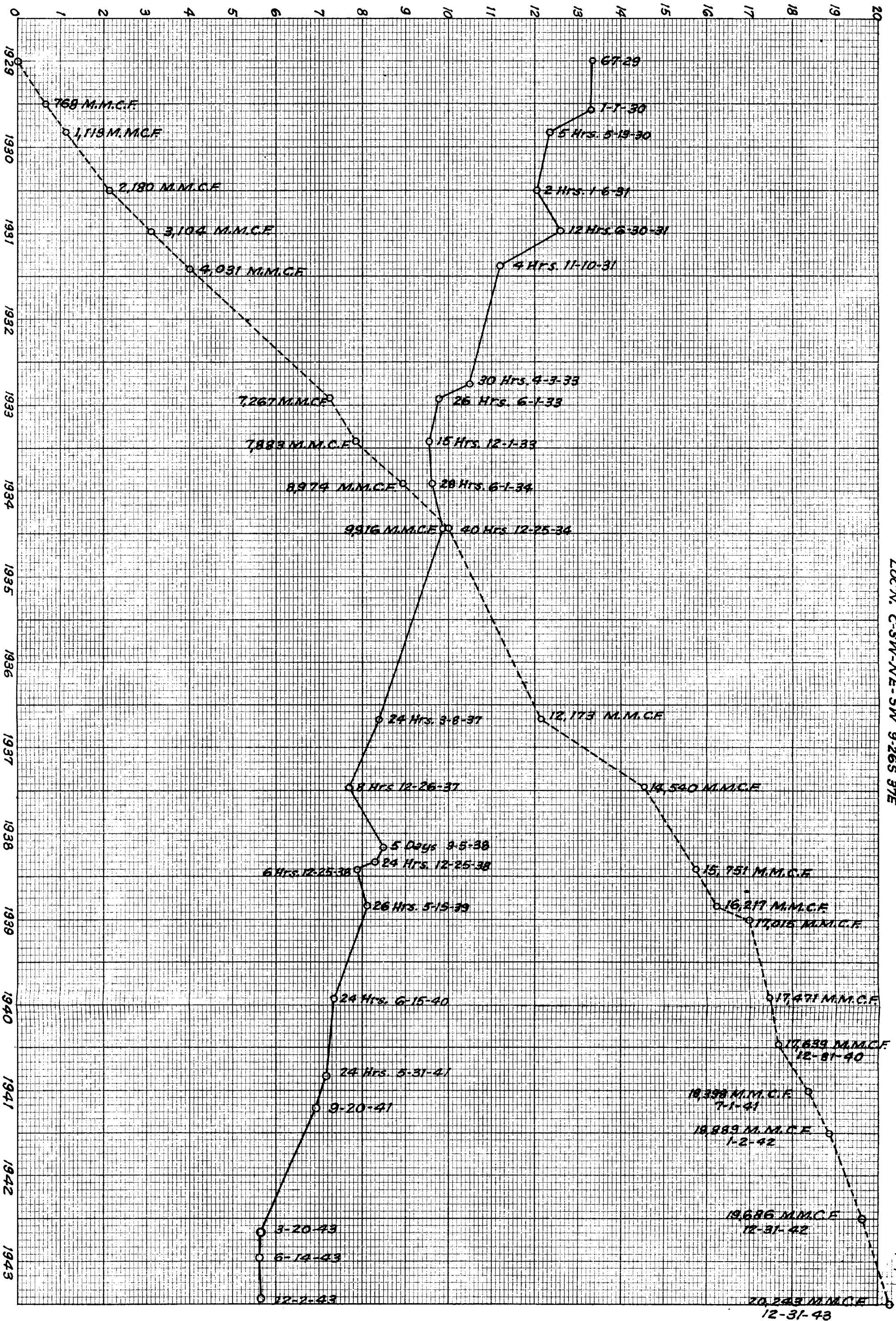
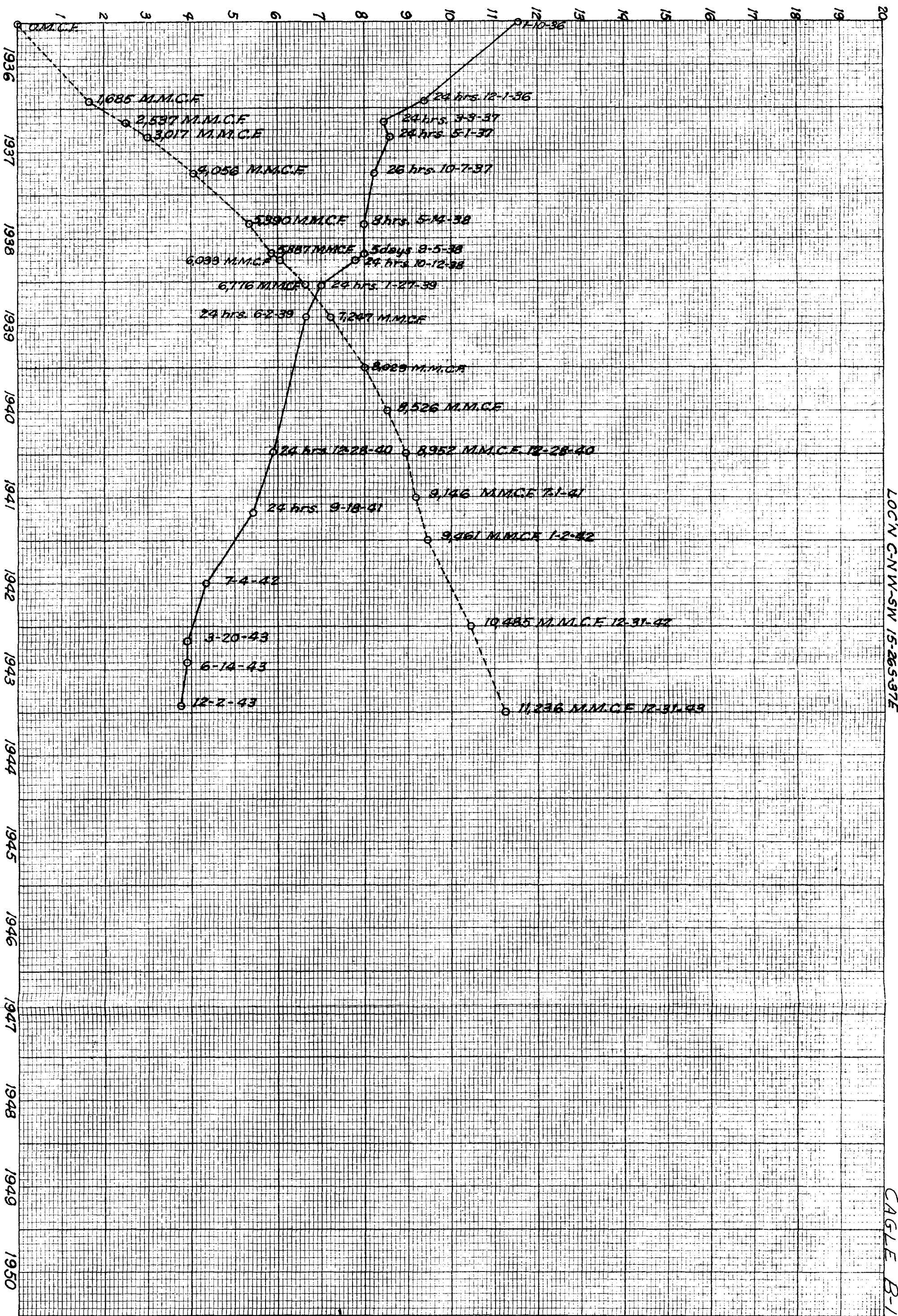


EXHIBIT B

Past performance curves on all gas wells
in the unit, showing accumulated production
curves plotted against shut-in pressure.

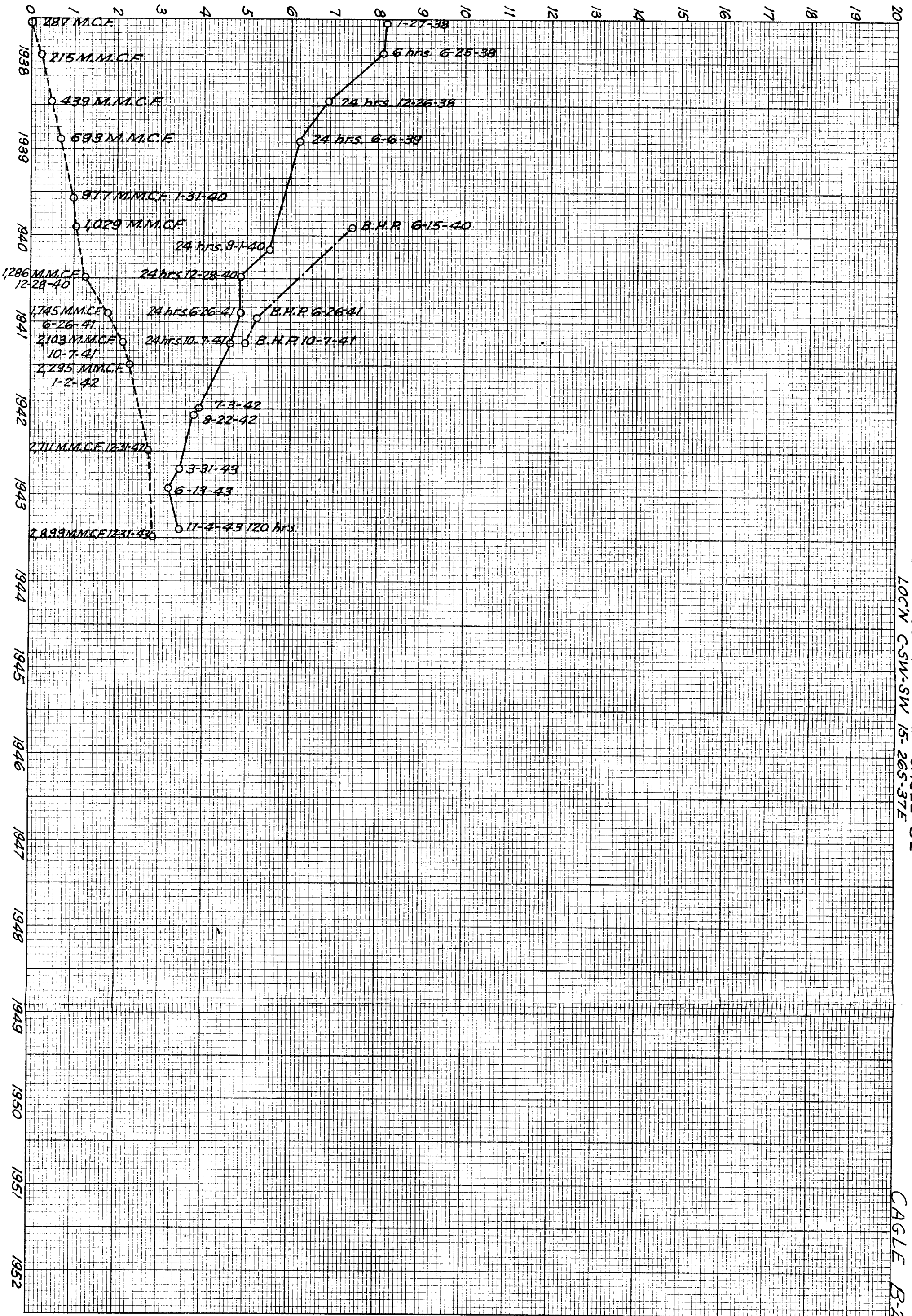


CAGLE A-2



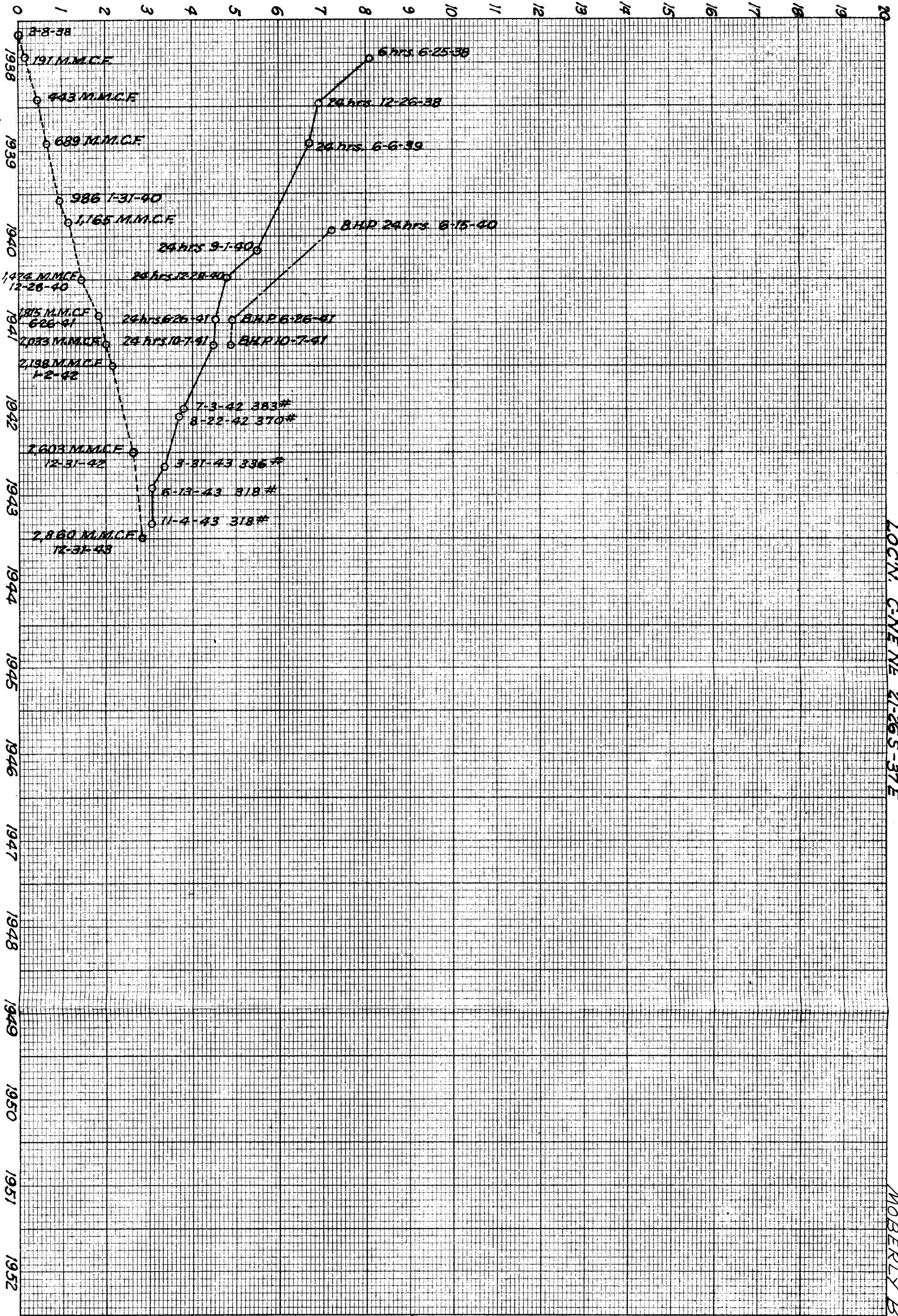
TEXAS COMPANY # CAGLE B-1
LOCN C-NW-SW 15-26-37E

CAGLE B-1



TEXAS COMPANY W. CAGLE B-2
LOCN C-SW-SW 15-26S-37E

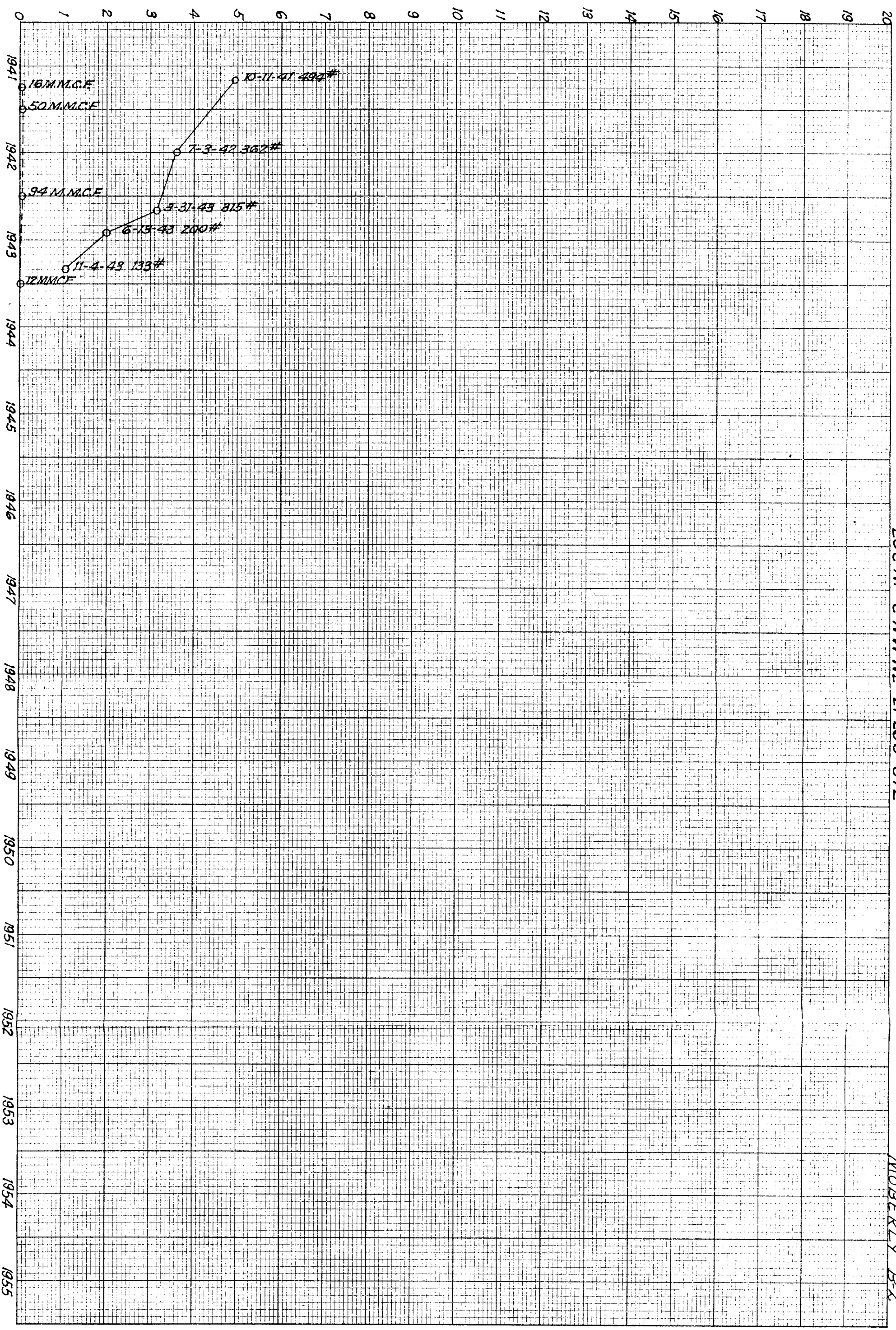
CAGLE B-2

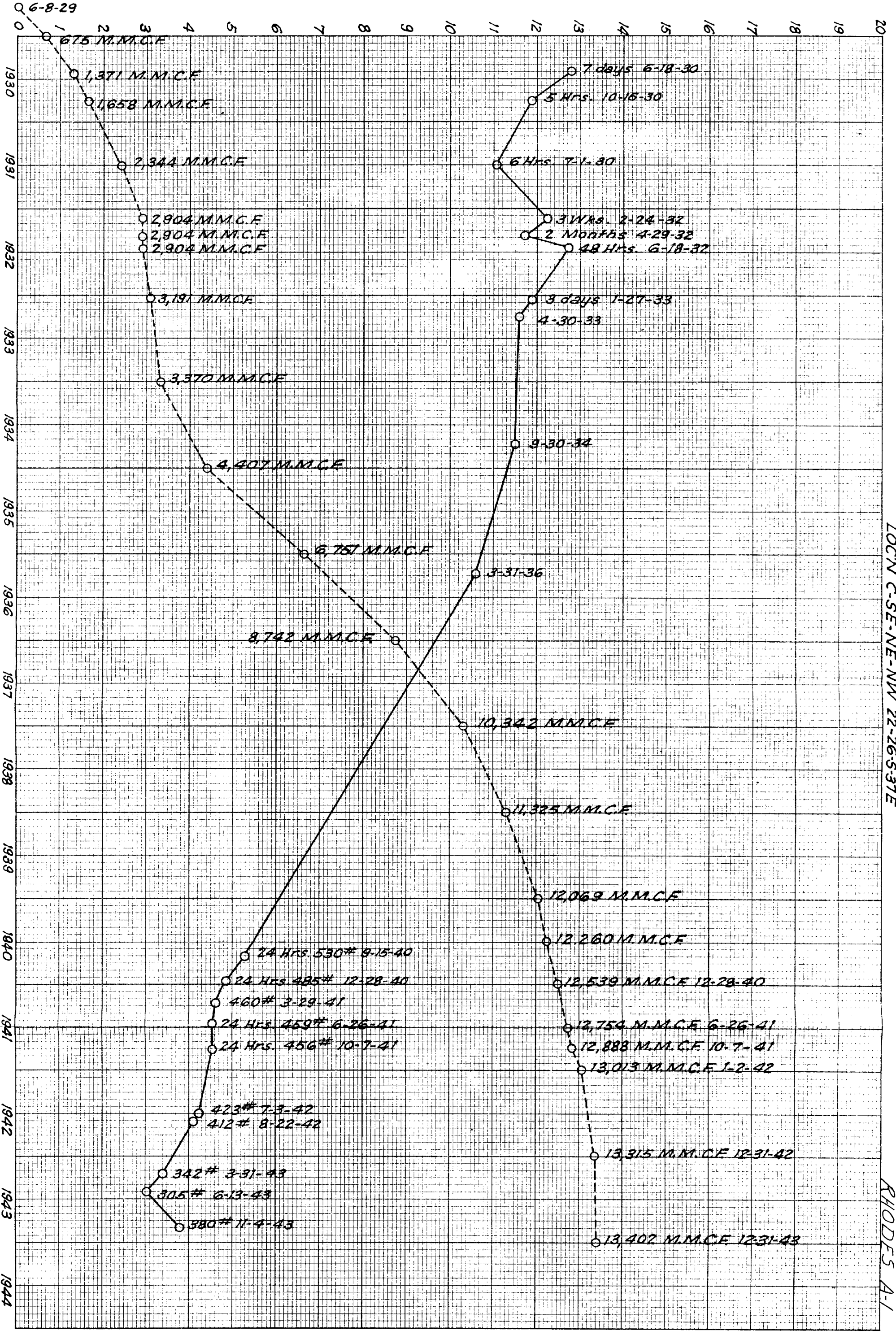


TEXAS COMPANY & MOBERLY B1
LOCN. CENE NE 21-26S-37E
MOBERLY B1

TEXAS COMPANY ~ MOBERLY B2
LOC'N. CNW NE 21-265-37E

MOBERLY B2

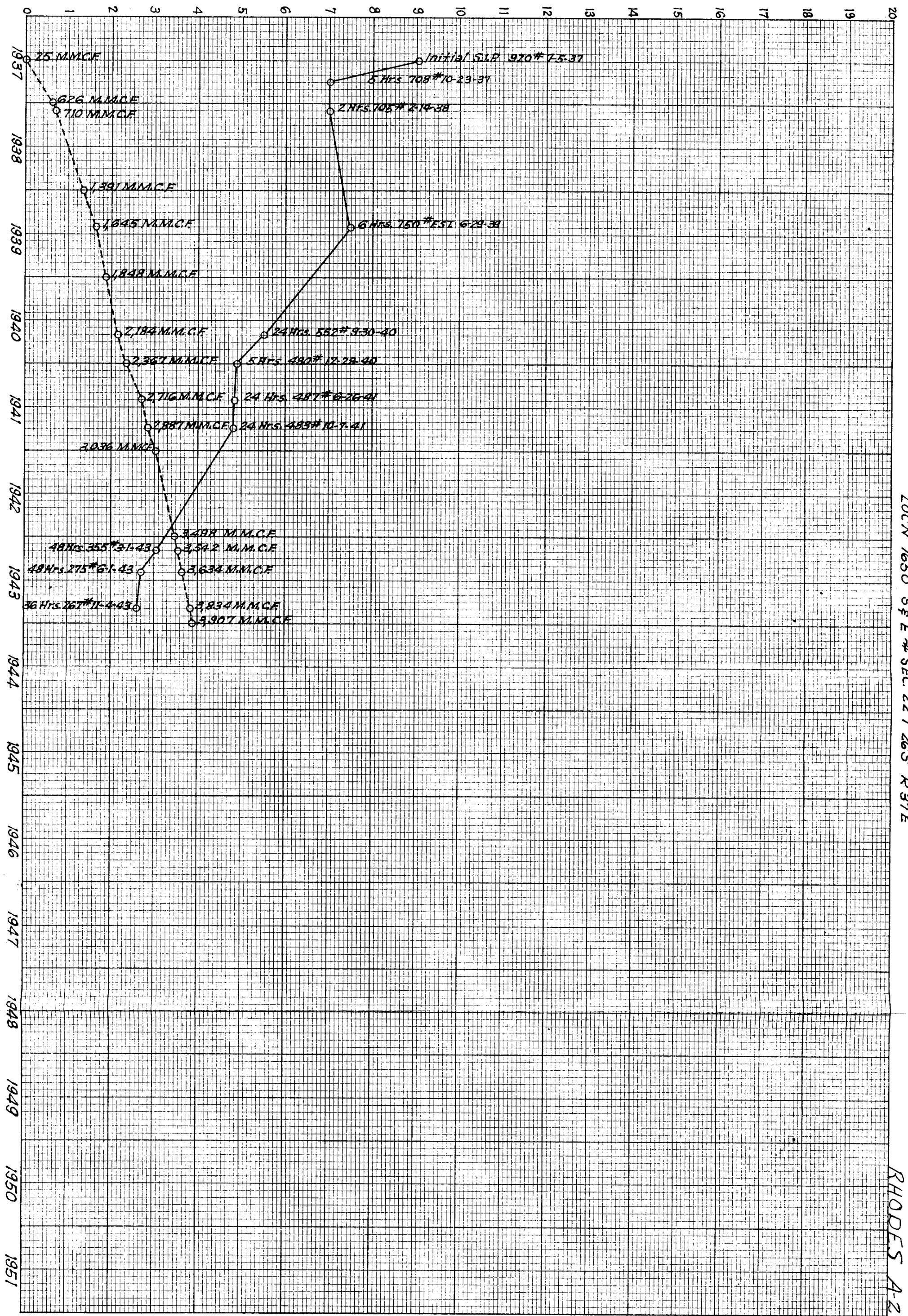




TEXAS COMPANY & RHODES A-1
LOCN C-SE-NE-NW 22-26-S-37E

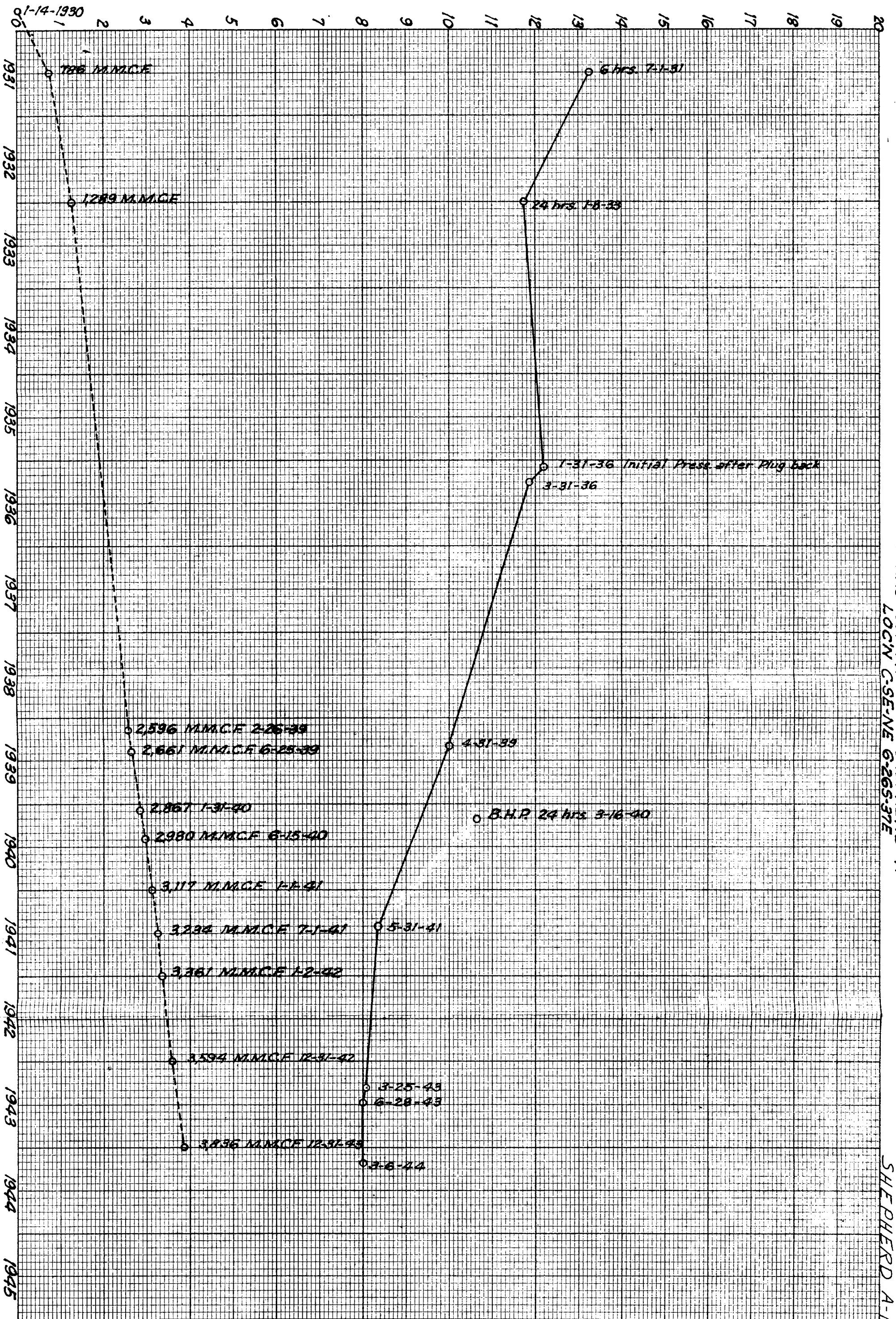
RHODES A-1

MADE IN U.S.A.
12 x 30 to the inch
KENTLER & ESSER CO., N.Y. NO. 920-511



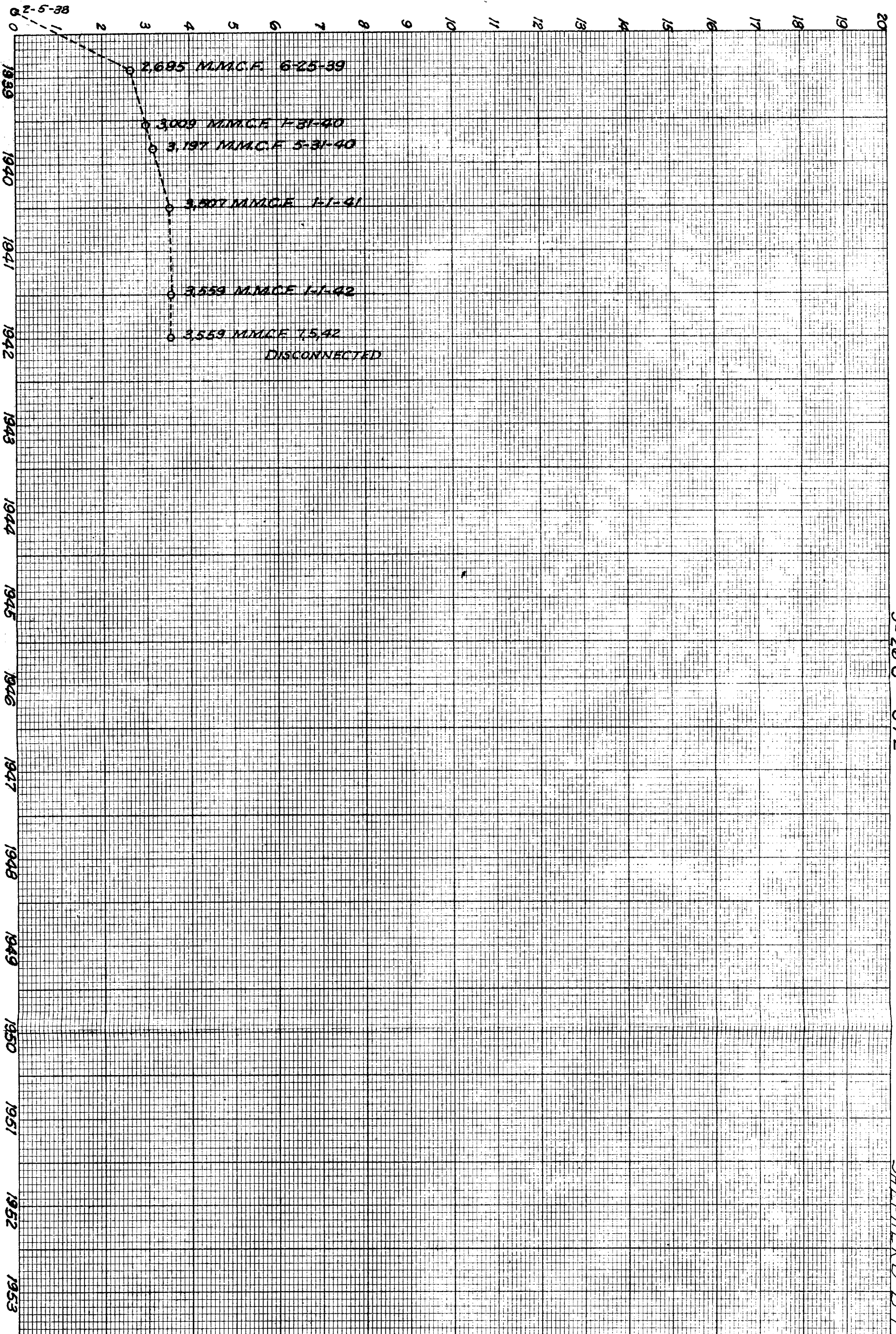
TEXAS COMPANY RHODES A-2
LOCN 1650 S&E # SEC. 22 T 26 S R 37 E

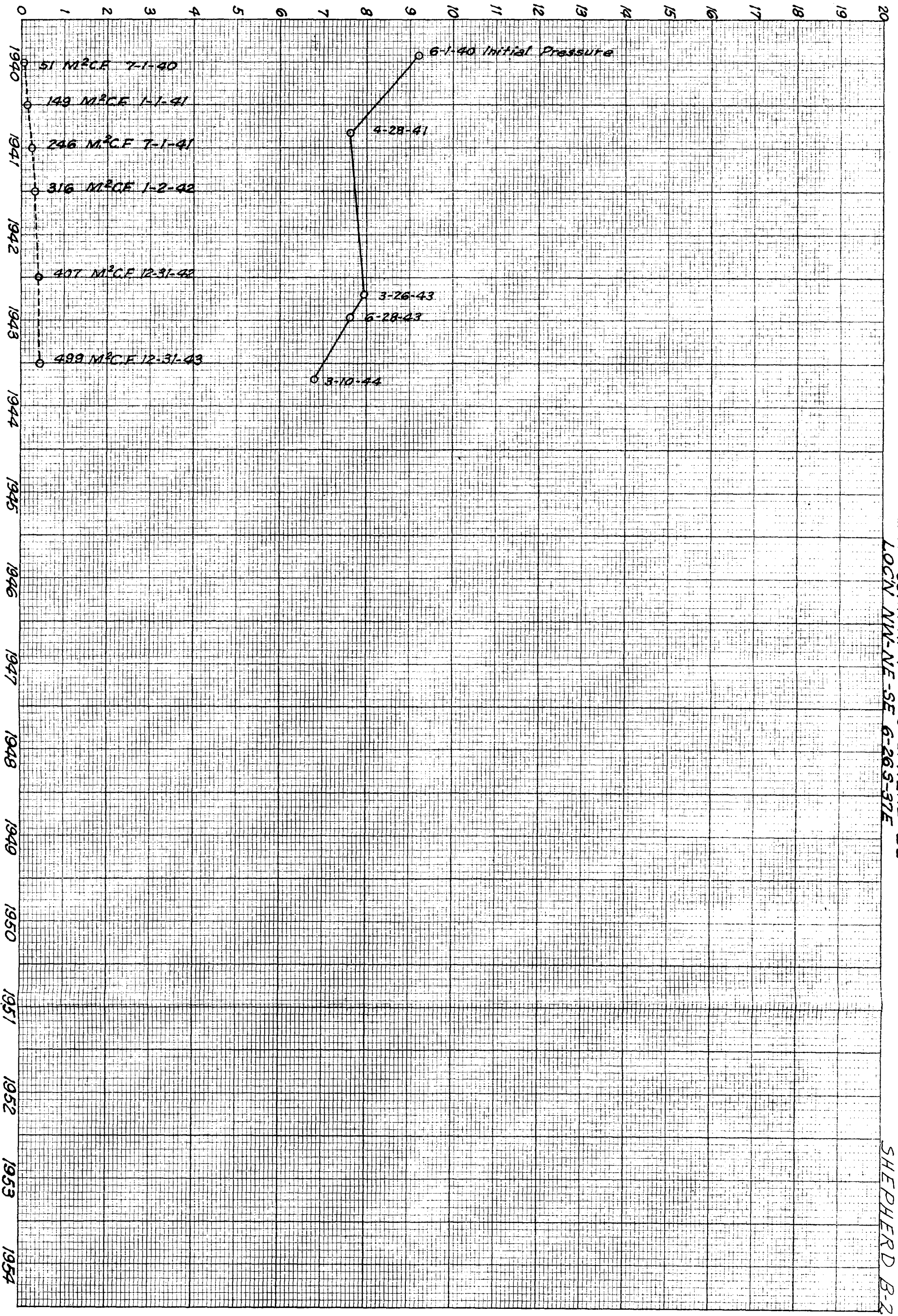
RHODES A-2



TEXAS COMPANY NO. 6-265-37E

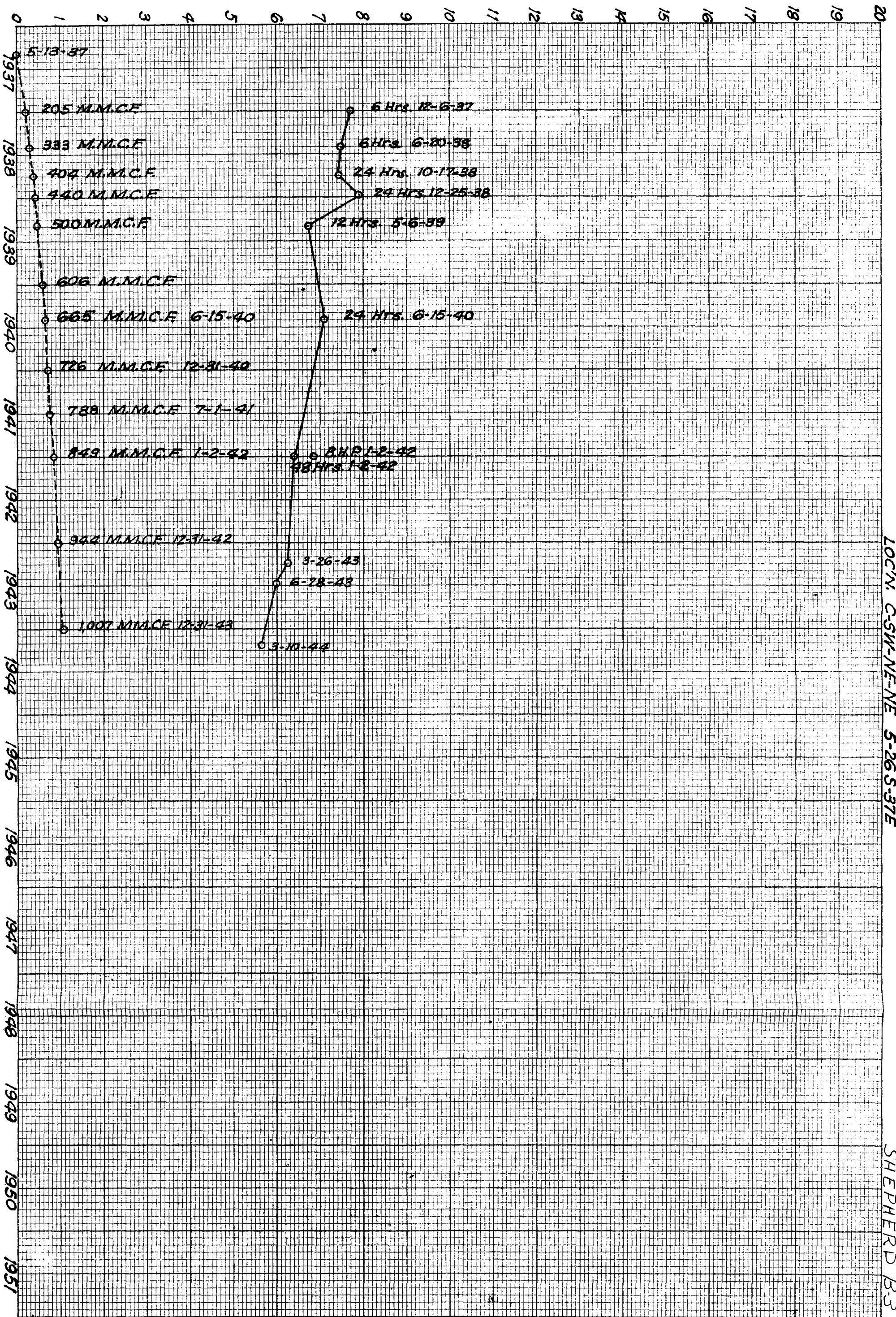
SHEPHERD A-1





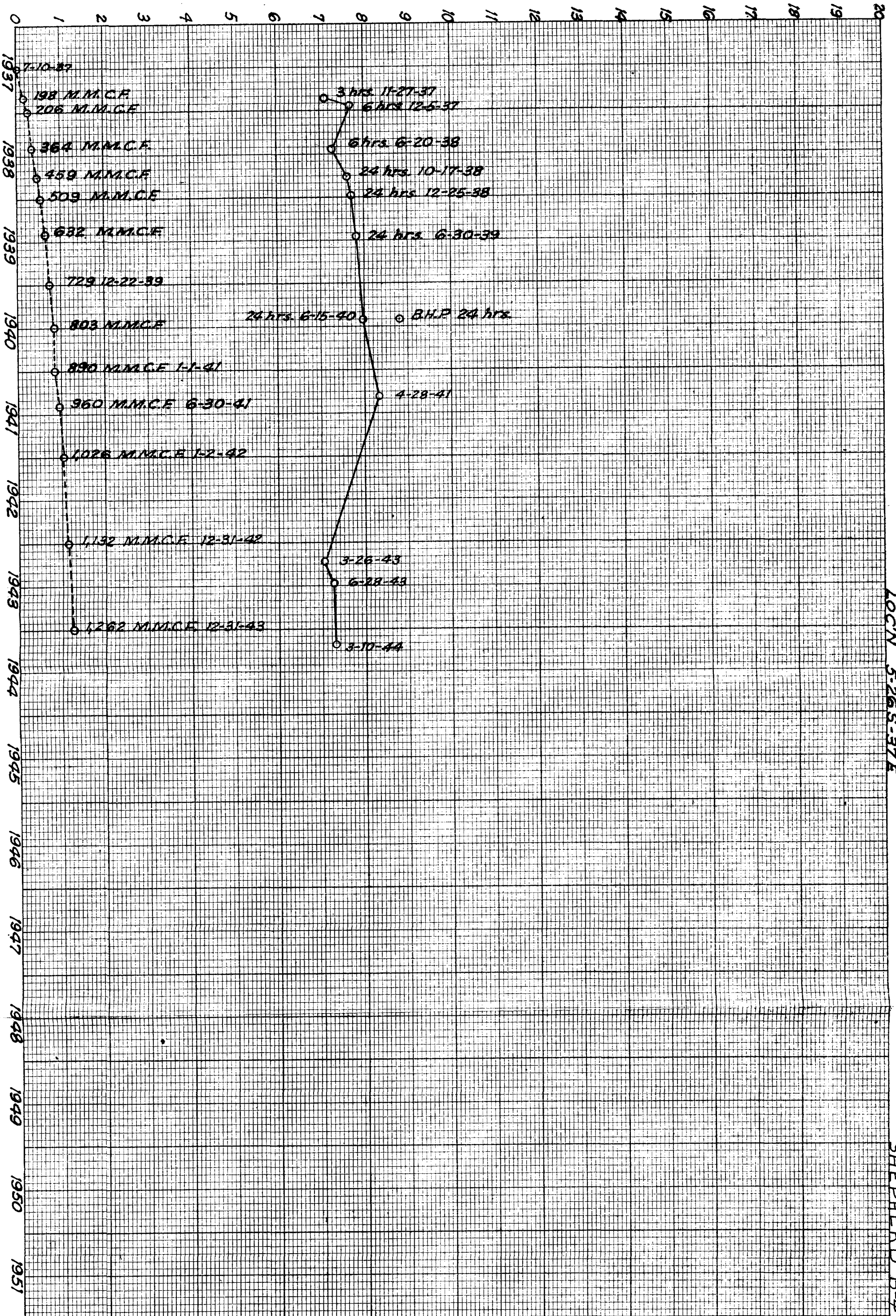
TEXAS COMPANY ~ SHEPHERD B2
LOCN NW-NE-SE 6-26-37E

SHEPHERD B-2



TEXAS COMPANY ~ SHEPHERD B-3
LOC N. C-SW-NE-NE 5-26S-37E

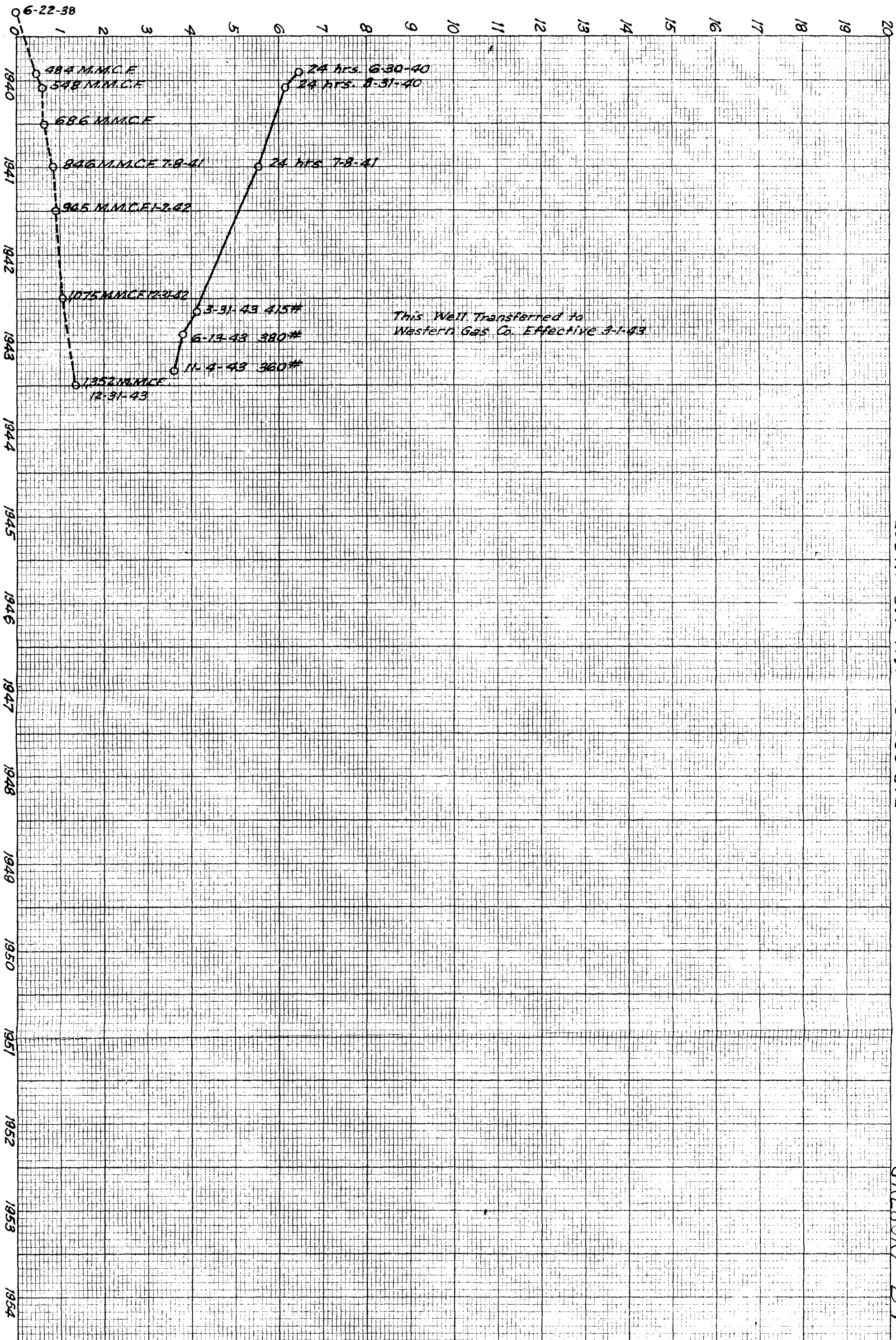
SHEPHERD B-3



TEXAS COMPANY W. SHEPHERD B-4
LOCN 5-265-37E

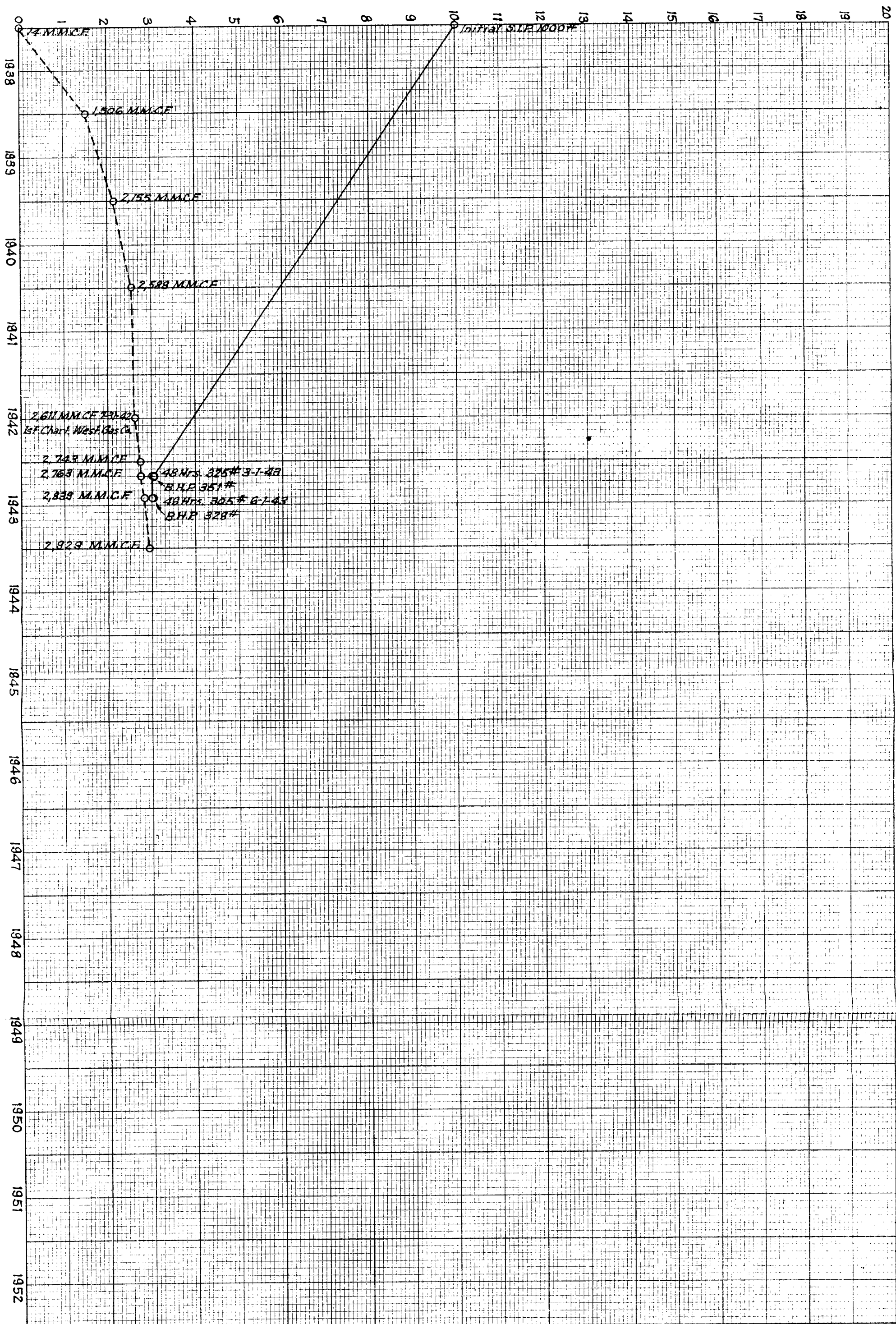
SHEPHERD B-4

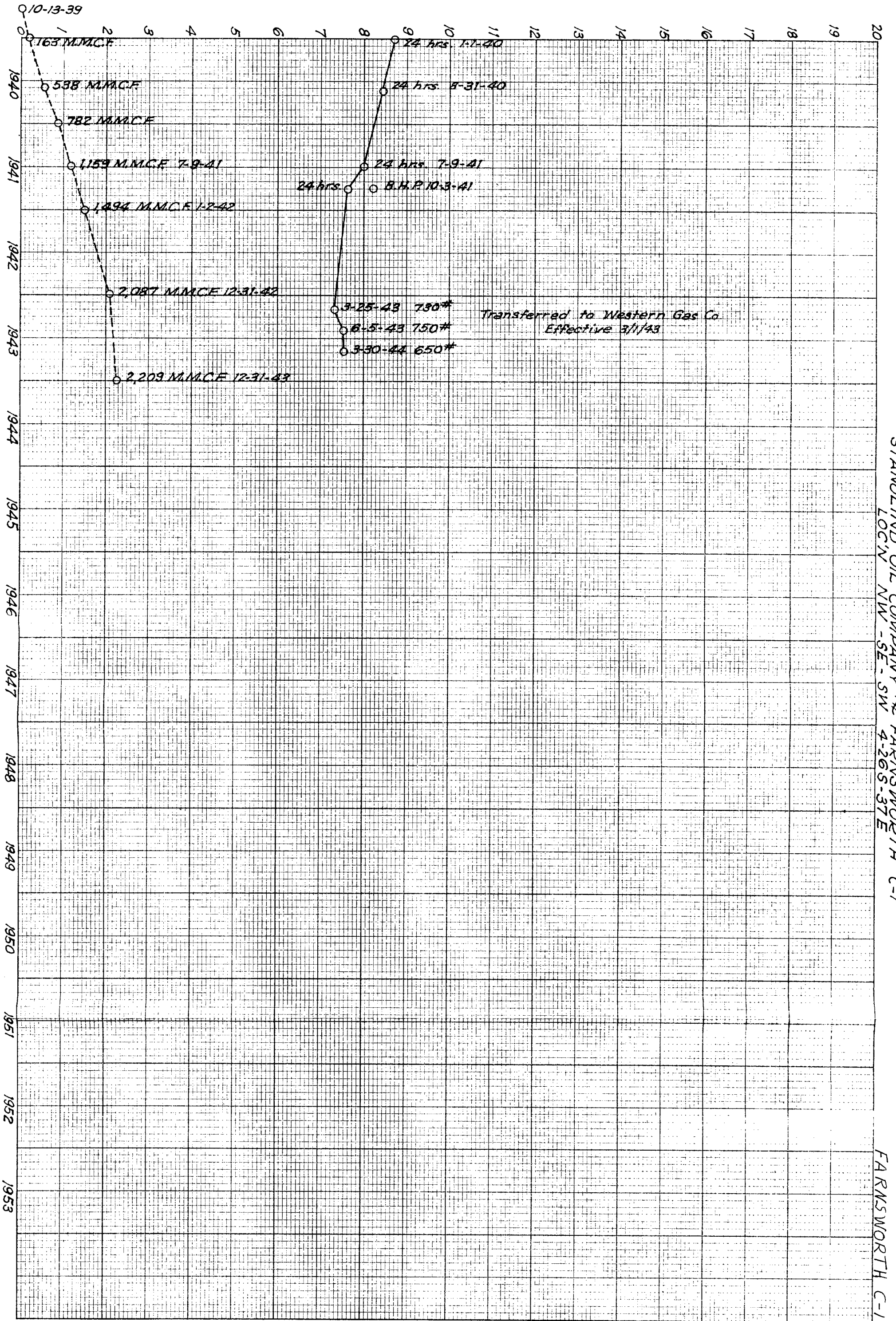
STATE Y-1



GREAT WESTERN PROD. INC.
PURCHASED BY WESTERN GAS COMPANY
LOCN. CSE-SE SEC 16 T 26S R 37E

STATE A-1





STANOLIND OIL COMPANY ~ FARNSWORTH C-1
LOC'n NW - SE - SW 4-26S-37E
FARNSWORTH C-1

EXHIBIT C

**Gas well completion reports and back
pressure method open flow tests on
all gas wells within the area.**

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No.: A-1 Well: Cagle
County: Lea State: New Mexico
Date: 1-8-29 Area: Rhodes
Sec.: 9 Twp.: 26 Rge.: 37 Locn.: NBSW
T. D.: 3473, PB 3200

Gas Zones: 2836-59, est. 10,000 Mcf 3070-80
 2933-35
 3038-45

Oil Zones: 3122-23
 3145-60
 3175-80, At 3180 gauged 45 M²cf with 300# BP

Initial Production: 55,000,000 cubic feet of gas daily

Initial Shut-In Pressure: 1400#

Initial H₂S Test: 2.74 gr/100 cf

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
12-1/2	651	150
6-1/4	2701	550
8-5/8	3020	75

WESTERN GAS COMPANY

GAS WELL COMPLETION REPORT

Company: Texas No.: A-2 Well: Cagle
County: Lea State: New Mexico
Date: 7-14-38 Area: Rhodes
Sec.: 9 Twp.: 26 Rge.: 37 Locn.: 990N-1650W NENW
T. D.: 3060

Gas Zones: s/g-2668 in Y8. Tested 300,000 cubic ft.

s/g-2750 small

Main Gas pay, 3040-60

Initial Production: 50,000,000 cubic feet sour gas

As Reported by: W. K. Davis Company: Western Gas Company

Init. H₂S Test: 67 gr. per Mcf By: A. A. Cohn Company: EPNGCo.

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
13	126	100
9-5/8	1042	350
7	2780	125

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No.: E-1 Well: Cagle
County: Lea State: New Mexico
Date: 1-2-36 Area: Rhodes
Sec.: 15 Twp.: 26 Rge.: 37 Locn.: N7SW
T. D.: 3160

Gas Zones: 3030-50 3050-63
 3063-74 3074-87
 3087-3159 3159-64

Drill Stem Tests: 1., 2750-3040, 490 M.c.f
 2., 3040-3142, 4,000 M.c.f. 3., 3040-3162, 8,000 Mcf

Initial Production: 34,483 Mcf

Initial Shut in Pres. 1175#

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
12-1/2	257	250
9-5/8	1137	600
7	3030	100

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No.: 2-B Well: Cagle
County: Lea State: New Mexico
Date: 1-19-38 Area: Rhodes
Sec.: 15 Twp. 26 Rge.: 37 Locn.: SWSW
T. D.: 3216 8

Gas Zones: 3190-3200	<u>Formation</u>	<u>Depth</u>	<u>Data</u>
	Elev.	2999	

Initial Production: 5,120 M²CF/day - OC.

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
10	1124	575
13	262	250
7	3010	125

Remarks: Shot 340:3056-3195

B. S. Tsts: (1) 3-1/4 M²CF, (2) 2,168 M²CF. AB- 5,000 M²CF

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No.: 1-B Well: Moberly
County: Lea State: New Mexico
Date: 2-26-28 Area: Rhodes
Sec.: 21 Twp.: 26 Rge.: 37 Locn.: NENE
T. D.: 3180

<u>Formation</u>	<u>Depth</u>	<u>Date</u>
Elev.	2995	

Initial Production: 19,500 M.C.F./Day

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
9-5/8	1122	575
7	2952	125

WESTERN GAS COMPANY

GAS WELL COMPLETION REPORT

Company: Texas No. 2-B Well: Moberly

County: Lea State: New Mexico

Date: 10/1/41 Area: Rhodes

Sec.: 21 Twp.: 26S R: 37E Locn.: NWNE

T. D.: 3415 P. B.: 3141

Gas Zones: ss/g 2865-67 L., No Estimate Formation Depth Data

s/g 3007-22 S., 878 Mcf. Elev. 2988

Pay 3218-20 L., 1,300 Mcf. T.A. 1043 /1945

Oil Zones: T.X.

ss/o 3212-14 S., No Estimate.B.X. 2690 4298

ss/o 3218-20 L., Est. 3 BOPD Spray T.B.L. 2712 4276

Drill Stem Tests T.Yates 2824 4164

T. HuxEFQG 2865 #123

Initial Production: 1,940 Mcf thru open csg.

Initial Shut in Pres. 4694

As Reported by: **Baulch** Company: **Western Gas**

Init. H₂S Test: 0.3 By: Baulch Company: Western Gas

And Shot 40qts. SNG: 3118-36

Results: Increased gas from 1,300 Mcf to 1. P.

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
10-1/4"	1128	300
7	3080	240

No tbg.

Signed W. C. KIMBALL

WESTERN GAS COMPANY

GAS WELL COMPLETION REPORT

Company: Texas No. A-1 Well: Rhodes
County: Lea State: New Mexico
Date: 10-31-27 Area: Rhodes
Sec.: 22 Twp. 26 Rge: 37 Locn: NENW
T. D.: 3213

Gas Zones: 3040, show 3105-3130, 16,000 Mcf

Oil Zones: 3160, gas & oil, 22,000 Mcf; 3193, gas & oil

Initial Production: 100 bbls. oil, 23,000 Mcf.

Initial Shut-in Pressure: 1400/

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
12-1/2	546	200
8-1/4	3040	1050

1" tbg. 3125

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No. A-2 Well: Rhodes
County: Lea State: New Mexico
Date: 6-21-37 Area: Rhodes
Sec.: 22 Twp. 26 Rge: 37 Locn.: NWSE
T.D.: 3280

Gas Zones: 3050-55, 3122-40

Oil Zones: 3170-3200, oil & gas

Haliburton Drill Stem Tests: 3000-3103, small amount of gas.

3000-3160, 3,500 Mcf gas.

Initial Production: 25,000 Mcf

Initial Shut-In Pressure: 920#

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
15-1/2	255	200
10-3/4	1150	600
7-5/8	3100	125

Remarks: Well was Shot.

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No. A-1 Well: Shepherd
County: Lea State: New Mexico
Date: 7-7-29 Area: Rhodes
Sec.: 6 Twp.: 26 Rge.: 37 Locn.: SENE
T.D.: 3318, PB to 3295 & re PB 3133

Gas Zones: 2810-12, At 3180 gauged 4,000 Mcf sour gas

Oil Zones: 3206-12, 3223-3300

Initial Production: 1561 bbls oil, 20,000 Mcf per day.

Initial Shut-In Pressure: 1200#

Initial H₂S Test 165 gr/100 cf

Acid: 250 gal. 500 gal.

Results: Increased gas Increased gas

Perforations: 2815-20, 2810-15, 2759-2823

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
20	18	To Top
12-1/2	896	200
8-1/4	2665	475
6-5/8	3150	75

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No.: B-1 Well: Shepherd
County: Lea State: New Mexico
Date: 5-8-33 Area: Rhodes
Sec.: 5 Twp.: 26 Rge.: 37 Loan.: NSW
T.D.: 3360 P.B.: 3077

Gas Zones: 2828-est. 5000 Mcf
 2794-2801
 2809-35

Oil Zones: s/o 2621-75, 2905-11, 2996-99
 s/o 3118-30, 3130-39, 3100-07, soft 3180-84

Drill Stem Tests: 2679-3100, 7,500 Mcf

Initial Production: 300 bbls Oil, 2,000 Mcf. Later 100%
 water and prod. 5 M²cf thru csg

Init. Shut in Pres. 1290#

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
12-1/2	499	225
9	2679	450
7	3100	500
2-1/2 tbg at 3063 with		
Pkr. at 3010.		

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No.: B-2 Well: Shepherd
County: Lea State: New Mexico
Date: 6-25-40 Area: Rhodes
Sec.: 6 Twp.: 26S Rge.: 37E Locn.: NESE
T.D.: 3243 P.B.: 2995

Gas Zones: 2675-2706; 2800; 2954-62; Formation Depth Data
3028-34 Elev. 2978

T.A. 1015 /1963

Oil Zones: 3105-12; 3126-34

T.X.

B.X. 2630 / 348

T.B.L. 2650 / 328

Initial Production: 1,515 Mcfg w/ 600# B.P.
2,447 Mcfg open flow thru 7".

Init. Shut in Pres.: 925#, BHP 1119# Init. Working Pres. 560# passing
600 Mcfg.

As Reported by: Murray, Texas Co., Baulch EPNG

Init. H2S Test: 227.0 By: Cohn Company: EPNG

Init. Gasoline Content: 1.41 GPM Cohn Epng

Perf's. 2910 to 2970. (At PB TD 3094, Perf 10:2940-55,

Results: IP 16:3006-30; 16:3065-90, 1shot/'

Remarks: 11/18/34 F1 IP 253 BFPD, 10% BS.

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
15-1/2	68	60
10-3/4	1518	910
7	3124	175

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No.: B-3 Well: Shepherd
County: Lea State: New Mexico
Date: 4-7-37 Area: Rhodes
Sec.: 5 Twp.: 26 Rge.: 37 Locn.: NENE
T.D.: 3290, plugged back to 3082

Gas Zones: 2708-13

Oil Zones: 3190-3228

Initial Production: 10,000 Mcf

Initial Shut-In Pressure: 1160#

Acid: 1000 gal., 3156-3228

Perforations: 2730-50, 40 shots

Remarks: Cement retainer set in 5½" at 3082

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
10-3/4	250	100
7-5/8	2626	600
5-1/2	3156	40

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No.: B-4 Well: Shepherd
County: Lea State: New Mexico
Date: 6-25-37 Area: Rhodes
Sec.: 5 Twp.: 26 Rge.: 37 Locn.: C - SE
T.D.: 3200, Plugged back to 2960

Gas Zones: 2825-60
 3075-90
 3135-50

Oil Zones: 3195-3200, oil & water

Halliburton Drill Stem Tests: 2893-3042, 130 Mcf. 2893-3146, 85 Mcf,
 150' ϕ fl., 30 min. 2893-3200, 1 hr., 1,000 Mcf,
 2 $\frac{1}{2}$ Bbls oil, 1 Bbl ϕ water.

Initial Production: 8,500 Mcf

Initial Shut-In Pressure: 1240#

Initial H₂S Test: 5 grains/100 cf

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
10-3/4	250	100
7-5/8	2684	500
5-1/2	2990	25
5-1/2" Cut at 2800 leaving liner 2800-2990.		

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Texas No. 1-Y Well: State
County: Lea State: New Mexico
Date: 2-3-40 Area: Rhodes
Sec.: 16 Twp.: 26 Rge: 37 Locn. SENE
T. D.: 3140

Gas Zones:	3040-3140	<u>Formation</u>	<u>Depth</u>	<u>Data</u>
		Elev.	2994	
		T.A.	1020	/1974
Oil Zones:	None	T.X.		
		B.X.	2620	/ 374
		T.B.L.	2660	/ 334
Drill Stem Tests:	None	T.Yates	2795	/ 199
Initial Production:	14,138,000	--	Open 6-5/8"	
Initial Shut In Pres.:	890#	Init. Working Pres.	375#	
Init. H ₂ S Test:	0.3	By: Cohn	Company EPNGCo.	
Acid:	None			
Perf's.	None			

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
13	248	180
9-5/8	1111	450
7	2953	125

No Tubing

Signed: T. C. K.

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Stanelind Oil & Gas No.: 1-B Well: Gregory

County: Lea

State: New Mexico

Date: 6-10-39

Area: Rhodes

Sec. 15. Twp: 26 Range: 37 Locn.: SWNW

T.D.: 3134

Gas Zones: odor: - 2930-40 Formation Depth Data
 show: - 3014-22
 Pays: - 3060-90, 3100-24 Elev. 3000

T.A. 990 plus 2010

Oil Zones: None

B.X. 2640 plus 360

T.B.L. 2990 plus 10

Drill Stem Tests: None

T.Yates 2855 plus 145

Initial Prod.: 4,000,000 cubic feet gas

Init. Shut in Pres.: 925#

As Reported by: Kendrick

Company: EPHG

Init. H₂S Test 0.35

By: Kendrick

Company: EPHG

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>	<u>Acid: None</u>
13	272	200	Results: "
9-5/8	1102	350	Perf's.: "
7	2945	100	Results: "
3" Tbg. - 3134			Remarks: "

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Great Western No.: 1 Well: State
County: Lea State: New Mexico
Date: 11-1-37 Area: Rhodes
Sec.: 16 Twp.: 26 Rge.: 37 Locn.: SESE
T.D.: 3277

Gas Zones: 2955-68: 3000-22 Formation Depth Data
3146-50 Elev. 2992
Oil Zones: 3057

Initial Prod.: 50,000 MCF/day

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
12-1/2	144	135
9-5/8	1125	500
7	2995	225

WESTERN GAS COMPANY
GAS WELL COMPLETION REPORT

Company: Stanolind Oil & Gas No.: 1-C Well: Farnsworth
County: Lea State: New Mexico
Date: 10-13-39 Area: Rhodes
Sec. 4 Twp: 26S Rge.: 37E Locn: SESW
T. D.: 3160

Gas Zones:	2720-2728,	3015-20	<u>Formation</u>	<u>Depth</u>	<u>Data</u>
	2737-2743			Elev. 2983	
	2934-2939		B. X.	2530	453
			T.B.L.	2550	433
			T.Yates Sand	2600	383
			FQG	2710	273

Init. Prod. 4,800,000 cubic feet gas

Init. Shut in Pres. 1010#

As Reported by: G. F. Kendrick Company: El Paso Natural Gas

Init. H₂S Test: 111.0 By: W. L. Smith Company: El Paso Nat. Gas.

Perf's.: 16 shots: 2695-2710; 40 shots: 2710-40.

Results: Approximately 1,500,000 cubic feet of gas

CASING RECORD

<u>Size</u>	<u>Depth</u>	<u>Cement</u>
13	290	200
8-5/8	1077	325
5-1/2	2774	100

2-1/2" Tbg. at 3028

BACK-PRESSURE TEST DATA SHEET

FIELD

DATE April 23, 19 41

CO. The Texas LEASE Cagle A WELL NO. 2

COUNTY Lee SEC. 9 BLK or TWS. T266 SURVEY or RGE. R37N LOC.

244 Csg. @ 2770 Tbg. @ GAS PAY FROM 2841 TO 2862 GR. 65 GL. 1854

SIZE METER RUN OR PROVER 4.026 TYPE CONNECTION Flange BAROMETER 13.3 e^s 1.155 F_q 6.61

OBSERVATIONS

No.	ORI-FICE size	METER PRES. Static P _m , Abs	Diff. h _w	FLOW TEMP. OF	WELHED WP, ABS. P _w	DURA-TION Hrs	No.	ORI-FICE size	METER PRES. Static P _m , Abs	Diff. h _w	FLOW TEMP. OF	WELHED WP, ABS. P _w	DURA-TION Hrs
1	2.750	645.3	9.7	69	655.3	17	5	2.750	588.3	35.0	70	588.3	48
2	-	643.3	25.0	71	643.3	8	6	-	-	-	-	-	-
3	-	593.3	19.2	70	593.3	18	7	-	-	-	-	-	-
4	-	577.3	45.0	70	577.3	21	8	-	-	-	-	-	-

FLOW CALCULATIONS

No.	ORI-FICE size	COEFF. C	WORKING PRES. h _w P _m or ON PROVER OR NIPPLE, ABS.	FLOWING TEMP. FACTOR F _{tg}	GRAVITY FACTOR F _g	DELIVERY RATE MCF PER 24 HRS Q
1	2.750	1211				2,561
2	-	-				3,561
3	-	-				4,378
4	-	-				5,493
5	2.750	1998				6,613
6	-	-				
7	-	-				
8	-	-				

PRESSURE CALCULATIONS

P_c 645.3 Lbs, Abs. P_c² 416.4 x e^s 1.155 = P_f² 480.9
(Shut in wellhead pressure) (Thousands)

No.	Q (Millions)	x F _q	= R	All Squared Pressures in Thousands					
				P _w ² x e ^s	e ^s P _w ² + R ²	= P _s ²	P _s ² - P _w ²	P _f ² - e ^s P _w ²	
1	2,561	6.61	16.9	403.6	1.155	466.2	14.5	14.7	
2	3,561	-	25.5	376.1	-	434.4	5.9	64.3	
3	4,378	-	38.9	352.4	-	406.6	5.8	74.3	
4	5,493	-	44.2	327.9	-	378.3	1.3	70.6	
5	6,613	-	44.2	313.0	-	373.1	1.9	107.8	
6									
7									
8									

Bottom hole pressure test.
Shut in pressure 645.3
2845' - 690
2965' - 700
3065' - 710
-200' - 743

ABSOLUTE OPEN FLOW 11,888 MCF PER 24 HRS.

Commission George E. Hendrick
Company
Pipe Line
Others

SIGNATURES

El. 2985'
Fluid level 2965', 42 ft. higher than on last test.

BACK-PRESSURE TEST DATA SHEET

FIELD

DATE

May 2

19 41

CO. The Texas

LEASE

Shepherd "A"

WELL NO. 1

COUNTY Lee

SEC. 6

BLK or

TWS. 1200

SURVEY

or RGE. 1371

LOC.

2-5/8

24"

Csg. @ 2004

8" 270

Tbg. @ 2007

GAS PAY FROM 2750

TO 2825

GR. 65

GL. 1255

SIZE METER

TYPE

RUN OR PROVER 4.024

CONNECTION 1/2" 2007

BAROMETER 13.5

e^s 1.147

F_q 145.22

OBSERVATIONS

Casing Press

No.	ORI-FICE size	METER PRES. Static P _m , Abs	PRES. Diff. h _w	FLOW TEMP. OF	WELHED WP, ABS. P _w	DURA-TION Hrs	No.	ORI-FICE size	METER PRES. Static P _m , Abs	PRES. Diff. h _w	FLOW TEMP. OF	WELHED WP, ABS. P _w	DURA-TION Hrs
1	1.250	281.5	16.0	70	281.5	10	5					281.5	
2	"	281.5	16	70	281.5	5	6					281.5	
3	"	281.5	16	70	281.5	5	7					281.5	
4	"	274.5	17	72	280.5	5	8						

FLOW CALCULATIONS

No.	ORI-FICE size	COEFF. C	WORKING PRES. h _w P _m or ON PROVER OR NIPPLE, ABS.	FLOWING TEMP. FACTOR F _{ts}	GRAVITY FACTOR F _g	DELIVERY RATE MCF PER 24 HRS Q
1	1.250	207				775
2	"	"				900
3	"	"				1,001
4	"	"				1,207
5						
6						
7						
8						

PRESSURE CALCULATIONS

$$P_c \frac{280.5}{(\text{Shut in wellhead pressure})} \text{ Lbs, Abs. } P_c^2 \frac{775.0}{(\text{Thousands})} \times e^s \frac{1.147}{1.147} = P_f^2 \frac{289.5}{289.5}$$

No	Q (Millions)	x	F _q = R	All Squared Pressures in Thousands						
				P _w ² x e ^s	e ^s P _w ² + R ² = P _s ²	P _s ² - P _f ²	P _f ² - e ^s P _w ²			
1	775	140.22	211.0	272.0	1.147	312.0	12.0	280.0	208.1	218.4
2	900	"	184.3	180.1	"	220.0	10.1	280.1	200.9	209.0
3	1,001	"	190.0	212.0	"	250.0	24.6	284.6	214.6	225.0
4	1,207	"	172.9	70.0	"	70.0	20.0	280.1	709.0	709.2
5										
6										
7										
8										

Points obtained while blowing gas to air.

Performed from 2825 to 2750 with 775 gal. air.

ABSOLUTE OPEN FLOW

1,200

MCF PER 24 HRS.

Build Up W.P. 2825

1st hr. 2807
2nd hr. 2800
3rd hr. 2794
4th hr. 2788
5th hr. 2782
6th hr. 2776
7th hr. 2770
8th hr. 2764
9th hr. 2758
10th hr. 2752

Fluid in hole Recorder off approx. 207

Commission
Company
Pipe Line
Others

George A. Hendrick

SIGNATURES

BACK-PRESSURE TEST DATA SHEET

FIELD

DATE April 28, 19 41

CO. The Texas LEASE Shepherd "B" WELL NO. 8

COUNTY Leon SEC. 6 BLK or TWS. T200 SURVEY or RGE. R27N LOC.

24 Csg. @ 2000 2-1/2 Tbg. @ 2000 GAS PAY FROM 2010 TO 2070 GR. 60 GL. 1984
Flow through tubing

SIZE METER TYPE CONNECTION Flange BAROMETER 12.8 e^s 1.156 F_q 83.16
RUN OR PROVER 4.026

{ S.I.P. - 5445
Pressures on Casing }

OBSERVATIONS

No.	ORI-FICE size	METER PRES. Static P _m , Abs	DIFF. h _w	FLOW TEMP. OF	WELHED WP, ABS. P _w	DURATION Hrs	No.	ORI-FICE size	METER PRES. Static P _m , Abs	DIFF. h _w	FLOW TEMP. OF	WELHED WP, ABS. P _w	DURATION Hrs
1	1.200	814.5	2.5	69	814.5	15	5		801.5				
2	"	419.5	15.0	76	419.5	6	6		404.5				
3	"	813.5	22.0	78	813.5	3	7		807.5				
4							8						

FLOW CALCULATIONS

No.	ORI-FICE size	COEFF. C	WORKING PRES. $\sqrt{h_w P_m}$ or ON PROVER OR NIPPLE, ABS.	FLOWING TEMP. FACTOR F _t	GRAVITY FACTOR F _g	DELIVERY RATE MCF PER 24 HRS Q
1	1.200	807				561
2	"	"				627
3	"	"				725
4						
5						
6						
7						
8						

PRESSURE CALCULATIONS

$$P_c \frac{774.5}{(\text{Shut in wellhead pressure})} \text{ Lbs, Abs. } P_c^2 \frac{807.5}{(\text{Thousands})} \times e^s \frac{1.156}{=} = P_f^2 \frac{693.0}{}$$

No	Q (Millions)	x	F _q	=	R	All Squared Pressures in Thousands					
						P _w ² x e ^s	e ^s P _w ² + R ²	= P _s ²	P _s ² - P _f ²	P _f ² - e ^s P _w ²	
1	561	83.16	44.7		814.5	1.156	306.8	2.2	308.0	225.0	83.2
2	627	"	57.1		419.5	"	405.8	3.3	409.1	485.5	489.8
3	725	"	61.1		813.5	"	126.3	3.7	240.0	240.0	250.7
4											
5											
6											
7											
8											

Gas flowed to air during test.

Fluid in hole during difference in press on casing & tubing.

Build up W.P. - 834.5

1st br. 700/)
2nd br. 700/)
3rd br. 700/)
4th br. 700/)
5th br. 700/)
6th br. 700/)
7th br. 700/)
8th br. 700/)

From meter.

ABSOLUTE OPEN FLOW 648 MCF PER 24 HRS.

Commission

Company

Pipe Line

Others

George A. Kendrick

SIGNATURES

BACK-PRESSURE TEST DATA SHEET

FIELD

DATE

May 1, 1941

CO. The Texas

LEASE

Shepherd "D"

WELL NO.

2

COUNTY

Lee

SEC.

3

BLK or

SURVEY

TWS.

134E

or RGE.

139E

LOC.

8-1/2"

171

Csg. @ 3150

Tbg. @

GAS PAY FROM

2710 TO 2700

GR.

40

GL.

1771

SIZE METER

TYPE

RUN OR PROVER

4086

CONNECTION

Flange

BAROMETER

13.3 e^s

1.143

F_q

12.91

OBSERVATIONS

No.	ORI-FICE size	METER PRES. Static P _m , Abs	METER PRES. Diff. h _w	FLOW TEMP OF	WELHED WP, ABS P _w	DURA-TION Hrs	No.	ORI-FICE size	METER PRES. Static P _m , Abs	METER PRES. Diff. h _w	FLOW TEMP OF	WELHED WP, ABS P _w	DURA-TION Hrs
1	1.000	503.5	1.0	22			5						
2	"	445.5	1.0	22			6						
3	"	387.5	1.0	22			7						
4	"	329.5	1.0	22			8						

FLOW CALCULATIONS

No.	ORI-FICE size	COEFF. C	WORKING PRES. ON PROVER OR NIPPLE, ABS.	FLOWING TEMP. FACTOR F _t	GRAVITY FACTOR F _g	DELIVERY RATE MCF PER 24 HRS Q
1	1.000	307				490
2	"	"				704
3	"	"				758
4	"	"				1,000
5						
6						
7						
8						

PRESSURE CALCULATIONS

$$P_c \frac{647.5}{(\text{Shut in wellhead pressure})} \text{ Lbs, Abs. } P_c^2 \frac{445.5}{(\text{Thousands})} \times e^s \frac{1.143}{1.143} = P_f^2 \frac{509.0}{509.0}$$

No.	Q (Millions)	x	F _q	=	R	All Squared Pressures in Thousands				
						P _w ² x e ^s	e ^s P _w ² + R ²	= P _s ²	P _s ² - P _g ²	P _s ² - e ^s P _w ²
1	490	12.91	6.1			503.5	1.143	503.5	.05	503.5
2	704	"	9.1			445.5	"	445.5	.1	445.5
3	758	"	9.7			387.5	"	387.5	.1	387.5
4	1,000	"	12.0			329.5	"	329.5	.1	329.5
5										
6										
7										
8										

Fluid drained from well through the tubing, set on bottom, before start of test.

ABSOLUTE OPEN FLOW

1,040

MCF PER 24 HRS.

All points obtained while blowing gas to air

Build up W.P. 530

1st hr. 500

2nd hr. 410

3rd hr. 400

4th hr. 410

5th hr. 410

6th hr. 410

Perforated 8-1/2"

with 40 shots

2700 - 2700

Commission

Company

George E. Kendrick

Pipe Line

Others

SIGNATURES

BACK-PRESSURE TEST DATA SHEET

FIELD _____

DATE April 24, 19 41

CO. Texas LEASE Shepherd "B" WELL NO. 4

COUNTY Lee SEC. 1 TWS. T24S or RGE. R37E LOC. _____

1-5/8" Csg. @ 2075' Tbg. @ _____ GAS PAY FROM 2816 TO 2891 GR. 65 GL. 1000

SIZE METER _____ TYPE _____
 RUN OR PROVER 4.026 CONNECTION Flange BAROMETER 11.1 e^s 1.150 F_q 5.03

#1 Test

OBSERVATIONS

#2 Test

No.	ORI-FICE size	METER Static P _m , Abs	PRES. Diff. h _w	FLOW TEMP OF	WELHED WP, ABS P _w	DURA-TION Hrs	No.	ORI-FICE size	METER Static P _m , Abs	PRES. Diff. h _w	FLOW TEMP OF	WELHED WP, ABS P _w	DURA-TION Hrs
1	.750	618.3	47	63	618.3	16	5	1.250	544.3	6.0	64	544.3	48
2	"	584.3	74	67	584.3	8	6	"	525.3	10.0	64	525.3	9
3	1.250	538.3	113	68	538.3	10	7	"	473.3	22.2	64	473.3	9
4	"	487.3	164	68	487.3	12	8	"	423.3	39.3	68	423.3	12

FLOW CALCULATIONS

No.	ORI-FICE size	COEFF. C	$\sqrt{h_w P_m}$ or WORKING PRES. ON PROVER OR NIPPLE, ABS.	FLOWING TEMP. FACTOR F_{ts}	GRAVITY FACTOR F_g	DELIVERY RATE MCF PER 24 HRS Q
1	.750	130				531
2	"	"				506
3	1.250	361				721
4	"	"				733
5	"	"				
6	"	"				
7	"	"				
8	"	"				

PRESSURE CALCULATIONS

$$P_c \frac{847.3}{(\text{Shut in wellhead pressure})} \text{ Lbs, Abs. } P_c^2 \frac{717.9}{(\text{Thousands})} \times e^s \frac{1.150}{=} = P_f^2 \frac{825.6}{}$$

No.	Q (Millions)	$x F_q = R$	All Squared Pressures in Thousands					
			$P_w^2 \times e^s$	$e^s P_w^2 + R^2$	$= P_s^2$	$R^2 - e^s P_w^2$		
1	531	5.03	2.7	187.3	1.150	439.6	.007	439.6
2	506	"	2.6	183.3	"	383.3	.008	383.3
3	721	"	3.6	209.3	"	113.3	.010	301.3
4	733	"	4.7	239.3	"	73.3	.020	269.3
5								
6								
7								
8								

#1 Test used to plot O.F.
 1st hr. 515#
 2nd hr. 515#
 3rd hr. 515#
 4th hr. 515#
 5th hr. 515#
 12th hr. 705#
 15th hr. 720#
 18th hr. 740#
 21st hr. 750#
 24th hr. 765#

ABSOLUTE OPEN FLOW 1,640 MCF PER 24 HRS.

Commission _____
 Company George E. Kendrick
 Pipe Line _____
 Others _____

SIGNATURES

BACK-PRESSURE TEST DATA SHEET

FIELD _____

DATE April 24, 1941

CO. Texas LEASE State "Y" WELL NO. 1

COUNTY Lee SEC. 14 TWS. 2364 or RGE. 2372 LOC. _____

1" Csg. @ 2342' Tbg. @ _____ GAS PAY FROM 3070 TO 3230 GR. 45 GL. 1704

SIZE METER _____ TYPE _____
 RUN OR PROVER 4.026 CONNECTION Flange BAROMETER 11.3 e^s 1.161 F_q 6.85

OBSERVATIONS

No.	ORI-FICE size	METER PRES.		FLOW TEMP. °F	WELHED WP, ABS. P _w	DURATION Hrs	No.	ORI-FICE size	METER PRES.		FLOW TEMP. °F	WELHED WP, ABS. P _w	DURATION Hrs
		Static P _m , Abs	Diff. h _w						Static P _m , Abs	Diff. h _w			
1	2.250	298.3	12.	70	298.3	24	5						
2	"	316.3	25.3	69	316.3	20	6						
3	"	341.3	25.	70	341.3	15	7						
4	"	377.3	12.	69	377.3	10	8						

FLOW CALCULATIONS

No.	ORI-FICE size	COEFF. C	WORKING PRES. $\sqrt{h_w P_m}$ or ON PROVER OR NIPPLE, ABS.	FLOWING TEMP. FACTOR F _{ts}	GRAVITY FACTOR F _g	DELIVERY RATE MCF PER 24 HRS Q
1	2.250	1221				2,837
2	"	"				2,580
3	"	"				2,400
4	"	"				1,955
5						
6						
7						
8						

PRESSURE CALCULATIONS

$$P_c \frac{635.3}{\text{(Shut in wellhead pressure)}} \text{ Lbs, Abs. } P_c^2 \frac{403.6}{\text{(Thousands)}} \times e^s \frac{1.161}{\text{(Thousands)}} = P_f^2 \frac{467.4}{\text{(Thousands)}}$$

No.	Q (Millions)	x F _q	= R	All Squared Pressures in Thousands					
				P _w ² x e ^s	e ^s P _w ² + R ² = P _s ²	P _f ² - P _s ²	P _f ² - e ^s P _w ²		
1	2,837	6.85	19.4	89.0	1.161	103.3	.4	103.7	363.7
2	2,580	"	17.1	100.0	"	116.1	.3	116.4	351.0
3	2,400	"	16.4	116.5	"	135.3	.3	135.6	331.8
4	1,955	"	13.6	142.4	"	149.3	.2	149.5	301.9
5									
6									
7									
8									

Gas delivered into pipe line duration of test.

ABSOLUTE OPEN FLOW 4,510 MCF PER 24 HRS.

Commission _____

Company George E. Kondrick

Pipe Line _____

Others _____

SIGNATURES

EXHIBIT D

**Engineering Report
and
Geological cross sections**

EXHIBIT D

Results of Tests on the Sweet Gas Area to Determine
the Most Favorable Input Wells

Shut-in Pressures During Test

	<u>Cagle B-2</u>	<u>State Y-1</u>	<u>State A-1</u>
Sept. 1	303	460	310
2	305	460	315
3	315	492	320
4	320	499	328
5	325	501	338
6	324	499	345
7	322	500	350
8	322	508	355
9	325	508	355
10	326	508	360
11	325	512	355
12	327	512	364
13	330	515	362
14	332	517	358
15	328	520	365

	<u>Moberly B-1</u>	<u>Plant Pressure</u>
Sept. 1	280	470
2	285	470
3	298	472
4	297	462
5	300	457
6	298	463
7	300	465
8	302	463
9	305	465
10	304	462
11	305	461
12	Injection	479
13	"	477
14	"	478
15	"	473

EXHIBIT D (Continued)

Rate of Injection and Pressures

		<u>Cagle B-1</u>		<u>Gregory B-1</u>		<u>Moberly B-1</u>	
		<u>Rate MCF</u>	<u>Pr.</u>	<u>Rate MCF</u>	<u>Pr.</u>	<u>Rate MCF</u>	<u>Pr.</u>
Sept.	1	5,042	435	1,459	440		
	2	4,839	440	1,228	445		
	3	4,196	438	1,140	447		
	4	4,318	437	948	442		
	5	3,932	436	905	446		
	6	4,098	443	933	450		
	7	4,249	450	1,034	450		
	8	4,139	455	1,069	450		
	9	3,671	450	909	450		
	10	3,468	442	898	451		
	11	3,440	445	820	452		
	12	3,797	451	978	460	1,748	470
	13	3,725	452	956	462	1,616	468
	14	3,513	453	930	460	1,561	468

Recommendations and Conclusions

In the sweet gas area it is recommended that the Cagle B-1 be selected as the original input well and in the sour gas area the Cagle A-2 be selected as the original input well. In arriving at these conclusions, consideration was given to rate of injections, pressures, ability to produce, location with respect to other wells in the project, presence of fluids, past performance, condition of the wells and geological cross sections which are attached hereto.