

PERMIAN

MAXIMUM SHUT IN PRESSURES

TUBB GAS POOL

Pan American Petroleum Corporation

Southland Royalty "A" 2

NW NE 9-21S-37E

Tubb Gas Pool

Date of Test = 11-7-58
to 11-12-58

1541.5 psig

2000

1800

1600

1400

1200

1000

800

600

400

200

0

SHUT IN PRESSURE (PSIG)

0 1 2 3 4 5 6 7 8 9 10

LENGTH OF SHUT IN PERIOD (Days)

Sinclair Oil & Gas Company

Barton 1

SW NE 23-21S-37E

Tubb Gas Pool

Date of Test = 1-2-59
to 2-4-59

Hand 10001
115 1000000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

SHUT IN PRESSURE (psig)

20

25

30

35

40

45

50

55

60

65

70

75

80

85

90

LENGTH OF SHUT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY Sinclair Oil & Gas Company LEASE Barton WELL NO. 1WELL ON PREFLOW: DATE 1-1-59 TIME 2:00 PM WELL SHUT IN: DATE 1-2-59 TIME 2:30 PM PRESSURE TAKEN: DATE 2-4-59 TIME 9:15 AMAVG. PREFLOW RATE 2220 Mcfd LENGTH OF PREFLOW 24.50 Hrs. SHUT-IN PRESS. CSG. 1797.1 TBG. _____ LENGTH OF SHUT-IN 33 Days P_c^2 3277SEPT. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL-HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
FRIDAY, JANUARY 2, 1959 2:30	WELL SHUT IN											
TUESDAY, JANUARY 6, 1959 12:15	1769.5		(93.75 HOUR SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 7, 1959 12:00	1773.4		(5 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 8, 1959 1:30	1776.4		(6 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 9, 1959 12:00	1777.6		(7 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 12, 1959 1:30	1782.7		(10 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 13, 1959 10:45	1784.2		(11 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 14, 1959 11:30	1785.2		(12 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 15, 1959 11:15	1785.7		(13 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 16, 1959 11:30	1786.7		(14 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 19, 1959 11:45	1789.9		(17 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 20, 1959 10:30	1791.0		(18 DAY SHUT IN PRESSURE)									

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Page (2)
BACK-PRESSURE TEST WORKSHEET

COMPANY Sinclair Oil & Gas Company LEASE Barton WELL NO. 1

WELL ON PREFLOW: DATE _____ TIME _____ WELL SHUT IN: DATE _____ TIME _____ PRESSURE TAKEN: DATE _____ TIME _____

AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ TBG. _____ LENGTH OF SHUT-IN _____ P_c^2 _____

SEP. GAS GRAVITY _____ API GRAVITY OF LIQUID _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
WEDNESDAY, JANUARY 21, 1959												
11:15	1790.8		(19 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 22, 1959												
10:45	1791.0		(20 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 23, 1959												
10:15	1792.1		(21 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 26, 1959												
10:00	1793.8		(24 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 27, 1959												
11:00	1794.1		(25 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 28, 1959												
10:30	1794.4		(26 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 29, 1959												
10:30	1795.2		(27 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 30, 1959												
10:30	1795.0		(28 DAY SHUT IN PRESSURE)									
TUESDAY, FEBRUARY 3, 1959												
9:15	1796.3		(32 DAY SHUT IN PRESSURE)									
WEDNESDAY, FEBRUARY 4, 1959												
9:15	1797.1		(33 DAY SHUT IN PRESSURE)									
	This is the maximum shut in pressure obtained.											
THURSDAY, FEBRUARY 5, 1959												
9:00	1796.8		(34 DAY SHUT IN PRESSURE)									
FRIDAY, FEBRUARY 6, 1959												
8:45	1797.0		(35 DAY SHUT IN PRESSURE)									

TEST COMPLETE

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Gulf Oil Corporation

Andrews 2-T

SW NE 32-22S-16E

Tubb Gas Pool

Date of Test = 11-30-58
to 2-6-59

STRAIGHT
DOWN
1000 PSI

LENGTH OF SHIFT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE Andrews WELL NO. 2-TWELL ON PREFLOW: DATE 11-28-58 TIME 10:30 AM WELL SHUT IN: DATE 11-30-58 TIME 10:30 AM PRESSURE TAKEN: DATE 1-30-59 TIME 9:15 AMAVG. PREFLOW RATE 1300 Mcfd LENGTH OF PREFLOW 48.50 Hrs. SHUT-IN PRESS. CSG. _____ TBG 1864.1 LENGTH OF SHUT-IN 61 Days P_c^2 3524SEP. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ N_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL-HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	BBL'S. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
SUNDAY, NOVEMBER 30, 1958												
10:30												
MONDAY, DECEMBER 1, 1958												
8:45			1790.0									
TUESDAY, DECEMBER 2, 1958												
8:45			1828.1									
WEDNESDAY, DECEMBER 3, 1958												
8:45			1834.6									
THURSDAY, DECEMBER 4, 1958												
8:45			1836.8									
FRIDAY, DECEMBER 5, 1958												
8:45			1836.0									
TUESDAY, DECEMBER 9, 1958												
8:45			1840.5									
WEDNESDAY, DECEMBER 10, 1958												
8:45			1841.2									
THURSDAY, DECEMBER 11, 1958												
8:45			1841.7									
FRIDAY, DECEMBER 12, 1958												
8:45			1843.2									
MONDAY, DECEMBER 15, 1958												
8:45			1845.4									
TUESDAY, DECEMBER 16, 1958												
10:00			1847.1									

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE Andrews WELL NO. 2-TWELL ON PREFLOW: WELL SHUT IN: PRESSURE TAKEN:
DATE _____ TIME _____ DATE _____ TIME _____ DATE _____ TIME _____AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ TBG. _____ LENGTH OF SHUT-IN _____ P_c^2 _____SEP. GAS GRAVITY _____ API GRAVITY OF LIQUID _____ METER RUN SIZE _____ GRIFFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
WEDNESDAY, DECEMBER 17, 1958												
8:45			1847.1	(17	DAY SHUT IN PRESSURE)							
THURSDAY, DECEMBER 18, 1958												
8:45			1848.3	(18	DAY SHUT IN PRESSURE)							
FRIDAY, DECEMBER 19, 1958												
8:45			1850.0	(19	DAY SHUT IN PRESSURE)							
MONDAY, DECEMBER 22, 1958												
8:45			1851.0	(22	DAY SHUT IN PRESSURE)							
TUESDAY, DECEMBER 23, 1958												
9:30			1851.9	(23	DAY SHUT IN PRESSURE)							
WEDNESDAY, DECEMBER 24, 1958												
9:00			1851.9	(24	DAY SHUT IN PRESSURE)							
FRIDAY, DECEMBER 26, 1958												
9:00			1853.8	(26	DAY SHUT IN PRESSURE)							
MONDAY, DECEMBER 29, 1958												
9:00			1855.9	(29	DAY SHUT IN PRESSURE)							
TUESDAY, DECEMBER 30, 1958												
9:00			1856.2	(30	DAY SHUT IN PRESSURE)							
WEDNESDAY, DECEMBER 31, 1958												
9:00			1856.2	(31	DAY SHUT IN PRESSURE)							
FRIDAY, JANUARY 2, 1959												
9:00			1857.1	(33	DAY SHUT IN PRESSURE)							
MONDAY, JANUARY 5, 1959												
9:00			1857.0	(36	DAY SHUT IN PRESSURE)							

See Page (3)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Page (5)
BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE Andrews WELL NO. 2-T

WELL ON PREFLOW: DATE _____ TIME _____ WELL SHUT IN: DATE _____ TIME _____ PRESSURE TAKEN: DATE _____ TIME _____

AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ TBG. _____ LENGTH OF SHUT-IN _____ P_c^2 _____

SEP. GAS GRAVITY _____ API GRAVITY OF LIQUID _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
TUESDAY, JANUARY 6, 1959												
9:00			1857.0	(37	DAY SHUT IN PRESSURE)							
WEDNESDAY, JANUARY 7, 1959												
9:00			1858.1	(38	DAY SHUT IN PRESSURE)							
THURSDAY, JANUARY 8, 1959												
9:00			1858.4	(39	DAY SHUT IN PRESSURE)							
FRIDAY, JANUARY 9, 1959												
11:15			1858.2	(40	DAY SHUT IN PRESSURE)							
MONDAY, JANUARY 12, 1959												
9:00			1858.0	(43	DAY SHUT IN PRESSURE)							
TUESDAY, JANUARY 13, 1959												
9:00			1859.0	(44	DAY SHUT IN PRESSURE)							
WEDNESDAY, JANUARY 14, 1959												
9:00			1859.3	(45	DAY SHUT IN PRESSURE)							
THURSDAY, JANUARY 15, 1959												
9:45			1859.6	(46	DAY SHUT IN PRESSURE)							
FRIDAY, JANUARY 16, 1959												
10:00			1859.8	(47	DAY SHUT IN PRESSURE)							
MONDAY, JANUARY 19, 1959												
10:00			1860.9	(50	DAY SHUT IN PRESSURE)							
TUESDAY, JANUARY 20, 1959												
9:30			1861.3	(51	DAY SHUT IN PRESSURE)							
WEDNESDAY, JANUARY 21, 1959												
9:45			1861.0	(52	DAY SHUT IN PRESSURE)							

See Page (4)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Page (4)
BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE Andrews WELL NO. 2-T

WELL ON PREFLOW: WELL SHUT IN: PRESSURE TAKEN:
DATE _____ TIME _____ DATE _____ TIME _____ DATE _____ TIME _____

AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ T8G. _____ LENGTH OF SHUT-IN _____ P_c^2 _____

SEP. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	BBL'S. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP T8G.								
THURSDAY, JANUARY 22, 1959												
9:15			1862.0	(53		DAY SHUT IN PRESSURE)						
FRIDAY, JANUARY 23, 1959												
9:15			1861.0	(54		DAY SHUT IN PRESSURE)						
MONDAY, JANUARY 26, 1959												
9:15			1862.2	(57		DAY SHUT IN PRESSURE)						
TUESDAY, JANUARY 27, 1959												
9:15			1863.0	(58		DAY SHUT IN PRESSURE)						
WEDNESDAY, JANUARY 28, 1959												
9:15			1862.8	(59		DAY SHUT IN PRESSURE)						
THURSDAY, JANUARY 29, 1959												
9:15			1863.6	(60		DAY SHUT IN PRESSURE)						
FRIDAY, JANUARY 30, 1959												
9:15			1864.1	(61		DAY SHUT IN PRESSURE)						
This is the maximum shut in pressure obtained.												
TUESDAY, FEBRUARY 3, 1959												
9:45			1863.4	(65		DAY SHUT IN PRESSURE)						
WEDNESDAY, FEBRUARY 4, 1959												
9:15			1863.2	(66		DAY SHUT IN PRESSURE)						
THURSDAY, FEBRUARY 5, 1959												
9:15			1862.7	(67		DAY SHUT IN PRESSURE)						
FRIDAY, FEBRUARY 6, 1959												
9:15			1862.3	(68		DAY SHUT IN PRESSURE)						

TEST COMPLETE

Tested By: R. L. West & J. D. Horton (Permian) witness: None

Skelly Oil Company

Baker WP 15-T

NW SE 10-228-37E

Tubb Gas Pool

Date of Test = 12-21-58
to 2-9-59

2000

SHUT IN PRESSURE (PSIG)

1800

1600

1400

1200

1000

800

600

400

200

0 0

0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60

Pressure 510
12-21-58

LENGTH OF SHUT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY Skelly Oil Company LEASE Baker "B" WELL NO. 15-TWELL ON PREFLOW: DATE 12-16-58 TIME 12:45 PM WELL SHUT-IN: DATE 12-21-58 TIME 10:00 AM PRESSURE TAKEN: DATE 2-5-59 TIME 9:30 AMAVG. PREFLOW RATE 2650 Mcfd LENGTH OF PREFLOW 8 Days SHUT-IN PRESS. CSG. 1689.0 LENGTH OF SHUT-IN 43 Days P_c^2 2897SEP. GAS GRAVITY 0.685 API GRAVITY OF LIQUID None METER RUN SIZE 4" ORIFICE SIZE 2.00" TYPE TAPS Pipe CO₂ 0.05% H₂ 1.60%

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP Tbg.								
WEDNESDAY, DECEMBER 24, 1958												
10:00			592.1			Flowing Pressure						
10:00	WELL SHUT IN											
FRIDAY, DECEMBER 26, 1958												
10:00			1589.6			(48 HOUR SHUT IN PRESSURE)						
MONDAY, DECEMBER 29, 1958												
10:00			1634.1			(5 DAY SHUT IN PRESSURE)						
TUESDAY, DECEMBER 30, 1958												
10:00			1640.8			(6 DAY SHUT IN PRESSURE)						
WEDNESDAY, DECEMBER 31, 1958												
10:00			1646.0			(7 DAY SHUT IN PRESSURE)						
FRIDAY, JANUARY 2, 1959												
10:00			1656.3			(9 DAY SHUT IN PRESSURE)						
MONDAY, JANUARY 5, 1959												
10:30			1664.4			(12 DAY SHUT IN PRESSURE)						
TUESDAY, JANUARY 6, 1959												
10:15			1667.0			(13 DAY SHUT IN PRESSURE)						
WEDNESDAY, JANUARY 7, 1959												
10:00			1669.2			(14 DAY SHUT IN PRESSURE)						
THURSDAY, JANUARY 8, 1959												
11:30			1670.8			(15 DAY SHUT IN PRESSURE)						
FRIDAY, JANUARY 9, 1959												
10:00			1671.8			(16 DAY SHUT IN PRESSURE)						

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Page (2)
BACK-PRESSURE TEST WORKSHEETCOMPANY Skelly Oil Company LEASE Baker "B" WELL NO. 15-T

WELL ON PREFLOW: DATE _____ TIME _____ WELL SHUT IN: DATE _____ TIME _____ PRESSURE TAKEN: DATE _____ TIME _____

AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ T8G. _____ LENGTH OF SHUT-IN _____ P_c^2 _____SEP. GAS GRAVITY _____ API GRAVITY OF LIQUID _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ N_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	Δ P Csg.	TUBING Psig	Δ P TBG.								
MONDAY, JANUARY 12, 1959 10:30			1675.8	(19	DAY SHUT IN PRESSURE)							
TUESDAY, JANUARY 13, 1959 9:45			1677.3	(20	DAY SHUT IN PRESSURE)							
WEDNESDAY, JANUARY 14, 1959 9:45			1678.4	(21	DAY SHUT IN PRESSURE)							
THURSDAY, JANUARY 15, 1959 10:00			1679.0	(22	DAY SHUT IN PRESSURE)							
FRIDAY, JANUARY 16, 1959 10:30			1679.4	(23	DAY SHUT IN PRESSURE)							
MONDAY, JANUARY 19, 1959 9:45			1682.3	(26	DAY SHUT IN PRESSURE)							
TUESDAY, JANUARY 20, 1959 9:45			1683.0	(27	DAY SHUT IN PRESSURE)							
WEDNESDAY, JANUARY 21, 1959 9:45			1683.2	(28	DAY SHUT IN PRESSURE)							
THURSDAY, JANUARY 22, 1959 9:45			1684.1	(29	DAY SHUT IN PRESSURE)							
FRIDAY, JANUARY 23, 1959 9:45			1683.6	(30	DAY SHUT IN PRESSURE)							
MONDAY, JANUARY 26, 1959 9:45			1685.2	(33	DAY SHUT IN PRESSURE)							
TUESDAY, JANUARY 27, 1959 9:45			1685.4	(34	DAY SHUT IN PRESSURE)							

See Page (3)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY Skelly Oil Company LEASE Baker "B" WELL NO. 15-T

WELL ON PREFLOW: _____ WELL SHUT IN: _____ PRESSURE TAKEN: _____
DATE _____ TIME _____ DATE _____ TIME _____ DATE _____ TIME _____

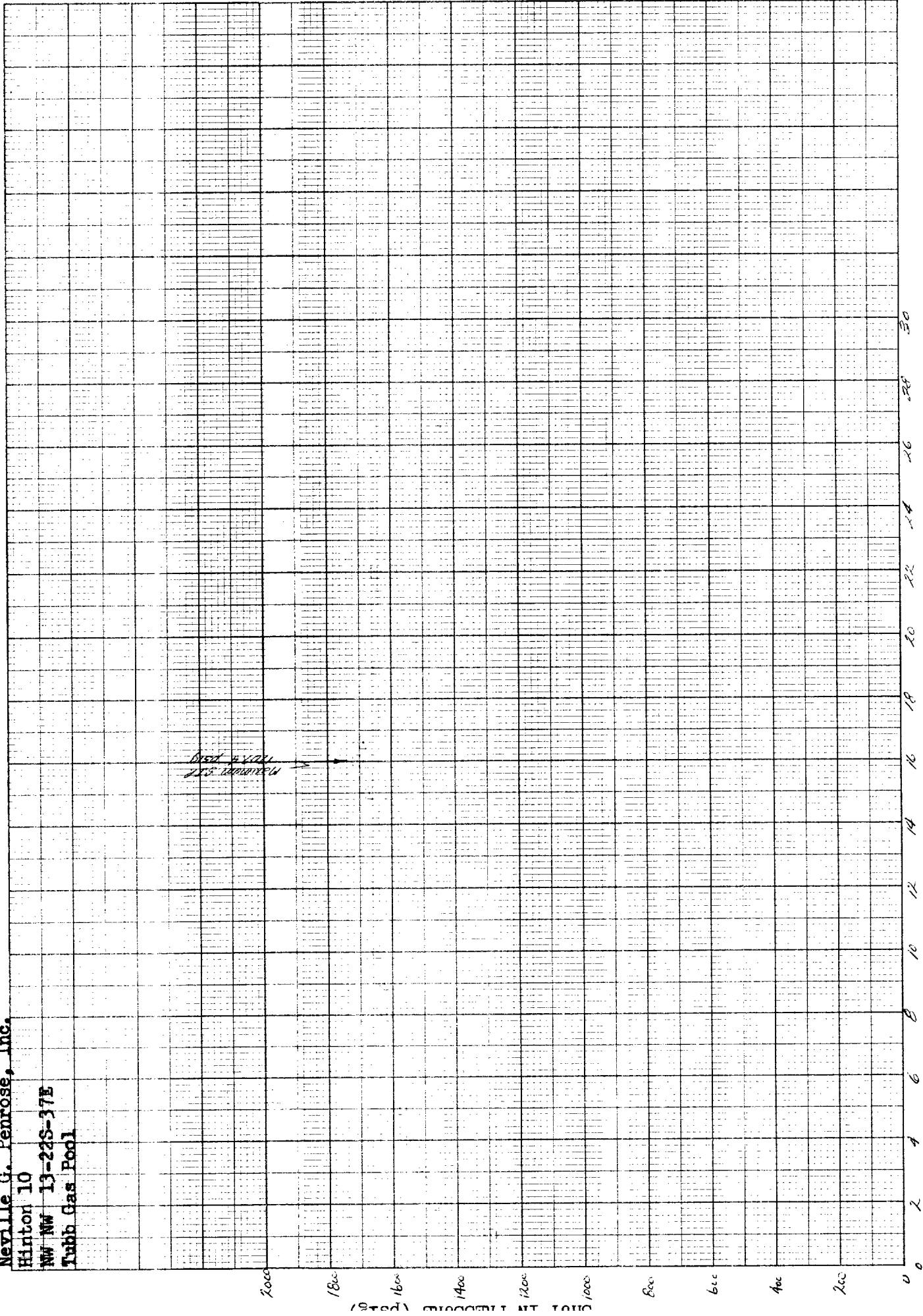
AVG. PREFLOW _____ LENGTH OF SHUT-IN _____ LENGTH OF
RATE _____ PREFLOW _____ PRESS. CSG. _____ TBG _____ SHUT-IN _____ P. 2 _____

SEP. GAS _____ API GRAVITY _____ METER RUN _____ ORIFICE _____ TYPE _____
GRAVITY _____ OF LIQUID _____ SIZE _____ SIZE _____ TAPS _____ CO₂ _____ N₂ _____

[illegible]

Tested By: R. L. West & J. D. Horton (Permian) witness: None

Neville G. Penrose, Inc.
Hinton 10
NW NW 13-24S-37E
Tubb Gas Pool



BACK-PRESSURE TEST WORKSHEET

COMPANY Neville G. Penrose, Inc. LEASE Hinton WELL NO. 10WELL ON PREFLOW: DATE 11-18-58 TIME 10:00 AM WELL SHUT IN: DATE 12-14-58 TIME 10:00 AM PRESSURE TAKEN: DATE 12-30-58 TIME 8:30 AMAVG. PREFLOW RATE 1900 Mcfd LENGTH OF PREFLOW 27 Days SHUT-IN PRESS. CSG. 1707.4 TBG. LENGTH OF SHUT-IN 16 Days P_c^2 2960SEP. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL-HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
SUNDAY, DECEMBER 14, 1958 10:00	WELL SHUT IN											
MONDAY, DECEMBER 15, 1958 10:30	1299.5		(24.50 HOUR SHUT IN PRESSURE)									
TUESDAY, DECEMBER 16, 1958 10:30	1472.5		(48.50 HOUR SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 17, 1958 10:30	1510.0		(72.50 HOUR SHUT IN PRESSURE)									
THURSDAY, DECEMBER 18, 1958 10:30	1547.6		(96.50 HOUR SHUT IN PRESSURE)									
FRIDAY, DECEMBER 19, 1958 10:30	1580.1		(5 DAY SHUT IN PRESSURE)									
MONDAY, DECEMBER 22, 1958 10:30	1620.2		(8 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 23, 1958 10:00	1626.7		(9 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 24, 1958 8:30	1645.2		(10 DAY SHUT IN PRESSURE)									
FRIDAY, DECEMBER 27, 1958 8:30	1660.3		(12 DAY SHUT IN PRESSURE)									
MONDAY, DECEMBER 29, 1958 8:30	1668.1		(15 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 30, 1958 8:30	1707.4		(16 DAY SHUT IN PRESSURE)									

This is the maximum shut in pressure obtained.

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Tested By: R. L. West & J. D. Horton (Permian) witness: None

Gulf Oil Corporation

McCormack 13

NE NE 32-21S-37E

Tubb Gas Pool

Date of Test = 1-4-59
to 1-26-59

Maximum 5.07
1762.8 PSI

LENGTH OF SHUT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE McCormack WELL NO. 13WELL ON PREFLOW: DATE 12-24-58 TIME 11:00 AM WELL SHUT IN: DATE 1-4-59 TIME 7:45 AM PRESSURE TAKEN: DATE 1-22-59 TIME 10:45 AMAVG. PREFLOW RATE 2650 Mcfd LENGTH OF PREFLOW 11 Days SHUT-IN PRESS. CSG. 1762.8 TBG. 1762.8 LENGTH OF SHUT-IN 18 Days P_c^2 3154SEP. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
SUNDAY, JANUARY 4, 1959 7:45	WELL SHUT IN											
MONDAY, JANUARY 5, 1959 11:15	1620.5		(27.50 HOUR SHUT IN PRESSURE)									
TUESDAY, JANUARY 6, 1959 11:00	1691.7		(51.25 HOUR SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 7, 1959 11:15	1708.4		(75.50 HOUR SHUT IN PRESSURE)									
THURSDAY, JANUARY 8, 1959 12:00	1719.4		(100.25 HOUR SHUT IN PRESSURE)									
FRIDAY, JANUARY 9, 1959 11:00	1727.1		(5 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 12, 1959 12:15	1741.9		(8 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 13, 1959 10:15	1744.8		(9 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 14, 1959 10:15	1748.3		(10 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 15, 1959 10:30	1749.0		(11 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 16, 1959 11:00	1750.7		(12 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 19, 1959 11:45	1756.3		(15 DAY SHUT IN PRESSURE)									

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE McCormack WELL NO. 13

WELL ON PREFLOW: _____ WELL SHUT IN: _____ PRESSURE TAKEN: _____
DATE _____ TIME _____ DATE _____ TIME _____ DATE _____ TIME _____

AVG. PREFLOW _____ LENGTH OF _____ SHUT-IN _____ LENGTH OF _____
RATE _____ PREFLOW _____ PRESS. CSG. _____ TBG _____ SHUT-IN _____ P. 2 _____

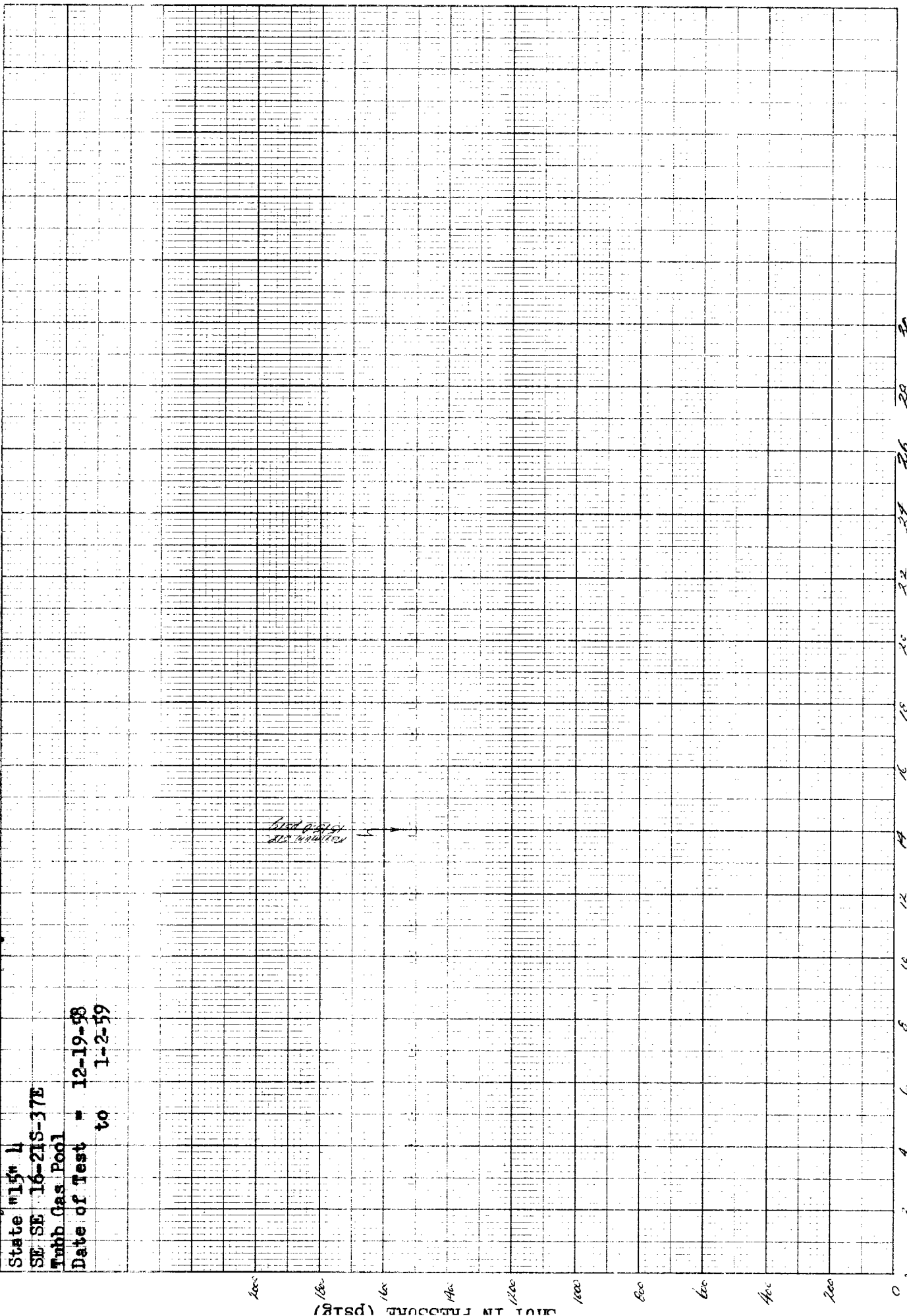
SEP. GAS _____ API GRAVITY _____ METER RUN _____ ORIFICE _____ TYPE _____
GRAVITY _____ OF LIQUID _____ SIZE _____ SIZE _____ TAPS _____ CO₂ _____ H₂ _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	BDLS. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP Tbq.								
TUESDAY, JANUARY 20, 1959												
8:45	1757.5		(16 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 21, 1959												
8:45	1760.0		(17 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 22, 1959												
10:45	1762.8		(18 DAY SHUT IN PRESSURE)									
	This is the maximum shut in pressure obtained.											
FRIDAY, JANUARY 23, 1959												
10:45	1760.2		(19 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 26, 1959												
10:30	1758.9		(22 DAY SHUT IN PRESSURE)									
	TEST COMPLETE											

Tested By: R. L. West & J. D. Horton (Permian) witness: None

Sunray Mid-Continent Oil Company

State #15 11
SE SE 16-21S-37E
Tubb Gas Pool
Date of Test = 12-19-58
to 1-2-59



LENGTH OF SHUT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY Sunray Mid-Continent Oil Company LEASE State "15" WELL NO. 4WELL ON PREFLOW: DATE _____ TIME _____ WELL SHUT IN: DATE 12-19-58 TIME 10:00 AM PRESSURE TAKEN: DATE 1-2-59 TIME 12:00 PMAVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ TBG. _____ LENGTH OF SHUT-IN _____ P_c^2 _____SEP. GAS GRAVITY _____ API GRAVITY OF LIQUID _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	BBL'S. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP Tbq.								
FRIDAY, DECEMBER 19, 1958 10:00	WELL SHUT IN											
MONDAY, DECEMBER 22, 1958 10:00	1512.0		(72.00 HOUR SHUT IN PRESSURE)									
TUESDAY, DECEMBER 23, 1958 1:00	1512.0		(99.00 HOUR SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 24, 1958 12:15	1511.9		(5 DAY SHUT IN PRESSURE)									
FRIDAY, DECEMBER 26, 1958 12:15	1513.0		(7 DAY SHUT IN PRESSURE)									
MONDAY, DECEMBER 29, 1958 12:15	1514.6		(10 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 30, 1958 12:15	1514.8		(11 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 31, 1958 12:00	1513.5		(12 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 2, 1959 12:00	1515.0		(14 DAY SHUT IN PRESSURE)									
	This is the maximum shut in pressure obtained.											
MONDAY, JANUARY 5, 1959 12:00	1513.2		(17 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 6, 1959 11:45	1513.7		(18 DAY SHUT IN PRESSURE)									

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Tested By: R. L. West & J. D. Horton (Permian) witness: None

The Ohio Oil Company

Warlick "C" 1

NW SE 15-21S-37E

Tubb Gas Pool

Date of Test = 11-27-58

to 1-2-59

Pressure (psi)

2000

1800

1600

1400

1200

1000

800

600

400

200

0

Pressure (psi)

2000

1800

1600

1400

1200

1000

800

600

400

200

0

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40

LENGTH OF SHUT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY The Ohio Oil Company LEASE Warlick "C" WELL NO. 1WELL ON PREFLOW: DATE 11-19-58 TIME 8:00 AM WELL SHUT IN: DATE 11-27-58 TIME 9:00 AM PRESSURE TAKEN: DATE 12-29-58 TIME 12:00 PMAVG. PREFLOW RATE 2900 Mcfd LENGTH OF PREFLOW 8 Days SHUT-IN PRESS. CSG. 1408.9 TBG. _____ LENGTH OF SHUT-IN 32 Days P_c^2 2022SEP. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
THURSDAY, NOVEMBER 27, 1958 9:00	WELL SHUT IN											
FRIDAY, NOVEMBER 28, 1958 10:45	1319.8		(23.75 HOUR SHUT IN PRESSURE)									
MONDAY, DECEMBER 1, 1958 10:00	1360.7		(97.00 HOUR SHUT IN PRESSURE)									
TUESDAY, DECEMBER 2, 1958 10:00	1366.9		(5 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 3, 1958 10:00	1374.0		(6 DAY SHUT IN PRESSURE)									
THURSDAY, DECEMBER 4, 1958 10:00	1376.5		(7 DAY SHUT IN PRESSURE)									
FRIDAY, DECEMBER 5, 1958 10:00	1379.8		(8 DAY SHUT IN PRESSURE)									
MONDAY, DECEMBER 8, 1958 10:00	1389.1		(11 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 9, 1958 10:00	1390.7		(12 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 10, 1958 10:00	1392.7		(13 DAY SHUT IN PRESSURE)									
THURSDAY, DECEMBER 11, 1958 10:00	1394.6		(14 DAY SHUT IN PRESSURE)									
FRIDAY, DECEMBER 12, 1958 10:00	1396.0		(15 DAY SHUT IN PRESSURE)									

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY The Ohio Oil Company LEASE Warlick "C" WELL NO. 1

WELL ON PREFLOW: DATE _____ TIME _____ WELL SHUT IN: DATE _____ TIME _____ PRESSURE TAKEN: DATE _____ TIME _____

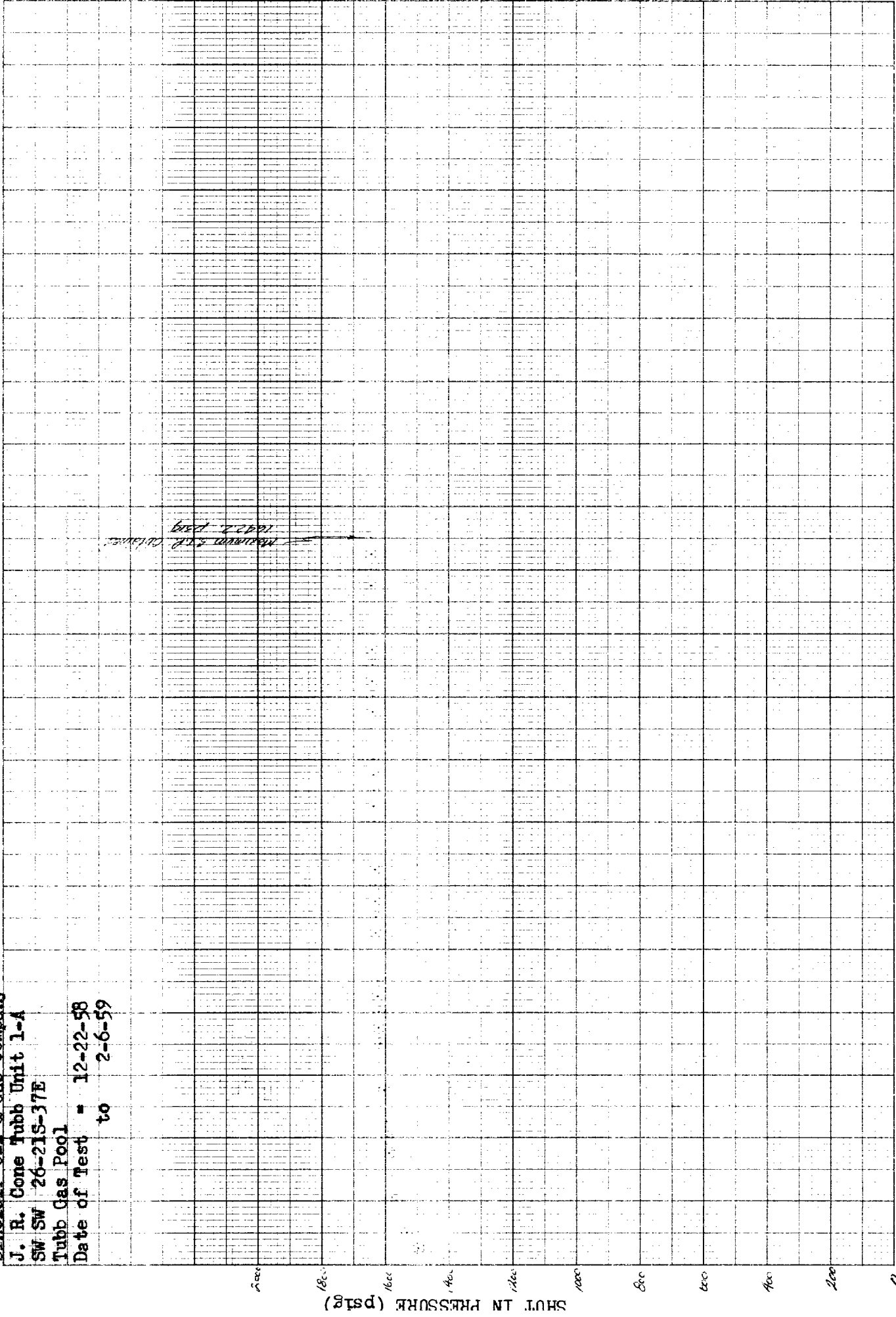
AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ TBG. _____ LENGTH OF SHUT-IN _____ P_c^2 _____SEP. GAS GRAVITY _____ API GRAVITY OF LIQUID _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP Tbg.								
MONDAY, DECEMBER 15, 1958												
10:00	1399.8		(18 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 16, 1958												
10:00	1401.0		(19 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 17, 1958												
10:00	1402.0		(20 DAY SHUT IN PRESSURE)									
THURSDAY, DECEMBER 18, 1958												
10:00	1403.0		(21 DAY SHUT IN PRESSURE)									
FRIDAY, DECEMBER 19, 1958												
10:00	1404.8		(22 DAY SHUT IN PRESSURE)									
MONDAY, DECEMBER 22, 1958												
10:00	1405.2		(25 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 23, 1958												
12:45	1406.1		(26 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 24, 1958												
12:00	1406.6		(27 DAY SHUT IN PRESSURE)									
FRIDAY, DECEMBER 26, 1958												
12:00	1407.7		(29 DAY SHUT IN PRESSURE)									
MONDAY, DECEMBER 29, 1958												
12:00	1408.9		(32 DAY SHUT IN PRESSURE)									
	This is the maximum shut in pressure obtained.											
TUESDAY, DECEMBER 30, 1958												
12:00	1407.8		(33 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 31, 1958												
12:00	1407.6		(34 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 2, 1959												
12:00	1407.4		(36 DAY SHUT IN PRESSURE)									

TEST COMPLETE

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Sinclair Oil & Gas Company
J. R. Cone Tubb Unit 1-A
SW SW 26-21S-37E
Tubb Gas Pool
Date of Test = 12-22-58
to 2-6-59



LENGTH OF SHUT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY Sinclair Oil & Gas Company LEASE J. R. Cone WELL NO. 1-AWELL ON PREFLOW: DATE 11-19-58 TIME 10:00 AM WELL SHUT IN: DATE 12-22-58 TIME 9:00 AM PRESSURE TAKEN: DATE 2-6-59 TIME 8:45 AMAVG. PREFLOW RATE 2500 Mcfd LENGTH OF PREFLOW 34 Days SHUT-IN PRESS. CSG. 1642.2 T8G. _____ LENGTH OF SHUT-IN 46 Days P_c^2 2740SEP. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	BBL'S. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP T8G.								
MONDAY, DECEMBER 22, 1958												
9:00	WELL SHUT IN											
TUESDAY, DECEMBER 23, 1958												
11:15	1498.1											
WEDNESDAY, DECEMBER 24, 1958												
11:15	1533.1											
FRIDAY, DECEMBER 26, 1958												
11:15	1566.7											
MONDAY, DECEMBER 29, 1958												
11:15	1590.7											
TUESDAY, DECEMBER 30, 1958												
11:15	1596.6											
WEDNESDAY, DECEMBER 31, 1958												
11:15	1599.7											
FRIDAY, JANUARY 2, 1959												
11:15	1602.2											
MONDAY, JANUARY 5, 1959												
11:45	1616.0											
TUESDAY, JANUARY 6, 1959												
11:45	1621.2											
WEDNESDAY, JANUARY 7, 1959												
11:45	1620.9											
THURSDAY, JANUARY 8, 1959												
1:15	1623.1											

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY Sinclair Oil & Gas Company LEASE J. R. Cone Tubb Unit WELL NO. 1-A

WELL ON PREFLOW: DATE _____ TIME _____ WELL SHUT IN: DATE _____ TIME _____ PRESSURE TAKEN: DATE _____ TIME _____

AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ T8G. _____ LENGTH OF SHUT-IN _____ P_c^2 _____

SEP. GAS GRAVITY _____ API GRAVITY OF LIQUID _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP Tbg.								
FRIDAY, JANUARY 9, 1959 11:30	1624.2		(18 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 12, 1959 1:30	1629.2		(21 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 13, 1959 10:45	1629.2		(22 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 14, 1959 11:15	1632.2		(23 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 15, 1959 11:15	1631.4		(24 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 16, 1959 11:30	1632.7		(25 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 19, 1959 11:45	1635.2		(28 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 20, 1959 10:30	1636.2		(29 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 21, 1959 11:00	1635.6		(30 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 22, 1959 10:45	1636.7		(31 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 23, 1959 10:00	1637.0		(32 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 26, 1959 9:45	1639.3		(35 DAY SHUT IN PRESSURE)									

See Page (3)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY Sinclair Oil & Gas Company LEASE J. R. Cone Tubb Unit WELL NO. 1-A

WELL ON PREFLOW: _____ WELL SHUT IN: _____ PRESSURE TAKEN: _____
DATE _____ TIME _____ DATE _____ TIME _____ DATE _____ TIME _____

AVG. PREFLOW _____ LENGTH OF SHUT-IN _____ LENGTH OF
RATE _____ PREFLOW _____ PRESS. CSG. _____ TBG _____ SHUT-IN _____ P. 2 _____

SEP. GAS _____ API GRAVITY _____ METER RUN _____ ORIFICE _____ TYPE _____
 GRAVITY _____ OF LIQUID _____ SIZE _____ SIZE _____ TAPS _____ CO₂ _____ H₂ _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	BBL'S. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	Δ P Csg.	TUBING Psig	Δ P Tbq.								
TUESDAY, JANUARY 27, 1959												
10:45	1639.6		(36 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 28, 1959												
10:30	1640.3		(37 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 29, 1959												
10:30	1640.1		(38 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 30, 1959												
10:30	1640.7		(39 DAY SHUT IN PRESSURE)									
TUESDAY, FEBRUARY 3, 1959												
9:00	1641.2		(43 DAY SHUT IN PRESSURE)									
WEDNESDAY, FEBRUARY 4, 1959												
9:00	1641.7		(44 DAY SHUT IN PRESSURE)									
THURSDAY, FEBRUARY 5, 1959												
8:45	1641.6		(45 DAY SHUT IN PRESSURE)									
FRIDAY, FEBRUARY 6, 1959												
8:45	1642.2		(46 DAY SHUT IN PRESSURE)									
	TEST COMPLETE											

Tested By: R.L. West & J.D. Horton (Permian) witness: None

The Ohio Oil Company

Lynch 1-17

NW NW 1-22-37

Tubb Gas Pool

Date of Test = 1-16-59
to 2-18-59

Pressure 1000 psi

SHIFT IN PRESSURE (psi)

LENGTH OF SHIFT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY The Ohio Oil Company LEASE Lynch WELL NO. 4-T

WELL ON PREFLOW: DATE 1-15-59 TIME 9:15 AM WELL SHUT IN: DATE 1-16-59 TIME 1:00 PM PRESSURE TAKEN: DATE 2-16-59 TIME 2:15 PM

AVG. PREFLOW RATE 2500 Mcfd LENGTH OF PREFLOW 27.75 Hrs. SHUT-IN PRESS. CSG. 1686.7 LENGTH OF SHUT-IN 31 Days P_c^2 2890

SEP. GAS GRAVITY 0.680 API GRAVITY None METER RUN SIZE 4" ORIFICE SIZE 2.00" TYPE TAPS Pipe CO_2 0.00% H_2 2.99%

TIME OF DAY	W.H. FLOWING PRESS.				WELL-HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	BBLs. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP Tbg.								
FRIDAY, JANUARY 16, 1959												
1:00			1243.7	Flowing Pressure								
1:00	WELL SHUT IN											
MONDAY, JANUARY 19, 1959												
11:30			1599.7	(70.50 HOUR SHUT IN PRESSURE)								
TUESDAY, JANUARY 20, 1959												
10:15			1631.6	(93.25 HOUR SHUT IN PRESSURE)								
WEDNESDAY, JANUARY 21, 1959												
10:15			1635.6	(5 DAY SHUT IN PRESSURE)								
THURSDAY, JANUARY 22, 1959												
8:30			1641.5	(6 DAY SHUT IN PRESSURE)								
FRIDAY, JANUARY 23, 1959												
8:30			1643.5	(7 DAY SHUT IN PRESSURE)								
MONDAY, JANUARY 26, 1959												
8:30			1652.5	(10 DAY SHUT IN PRESSURE)								
TUESDAY, JANUARY 27, 1959												
8:30			1655.5	(11 DAY SHUT IN PRESSURE)								
WEDNESDAY, JANUARY 28, 1959												
8:30			1657.4	(12 DAY SHUT IN PRESSURE)								
THURSDAY, JANUARY 29, 1959												
8:30			1660.0	(13 DAY SHUT IN PRESSURE)								
FRIDAY, JANUARY 30, 1959												
8:30			1662.4	(14 DAY SHUT IN PRESSURE)								

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Page (2)
BACK-PRESSURE TEST WORKSHEET

COMPANY The Ohio Oil Company LEASE Lynch WELL NO. 4-T

WELL ON PREFLOW: DATE _____ TIME _____ WELL SHUT IN: DATE _____ TIME _____ PRESSURE TAKEN: DATE _____ TIME _____

AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ TBG. _____ LENGTH OF SHUT-IN _____ P_c^2 _____

SEP. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	Δ P Csg.	TUBING Psig	Δ P Tbg.								
TUESDAY, FEBRUARY 3, 1959												
9:15			1671.0	(18	DAY SHUT IN PRESSURE)							
WEDNESDAY, FEBRUARY 4, 1959												
8:30			1671.7	(19	DAY SHUT IN PRESSURE)							
THURSDAY, FEBRUARY 5, 1959												
8:45			1672.3	(20	DAY SHUT IN PRESSURE)							
FRIDAY, FEBRUARY 6, 1959												
8:30			1674.6	(21	DAY SHUT IN PRESSURE)							
MONDAY, FEBRUARY 9, 1959												
8:30			1680.3	(24	DAY SHUT IN PRESSURE)							
TUESDAY, FEBRUARY 10, 1959												
8:30			1681.8	(25	DAY SHUT IN PRESSURE)							
WEDNESDAY, FEBRUARY 11, 1959												
9:00			1682.3	(26	DAY SHUT IN PRESSURE)							
THURSDAY, FEBRUARY 12, 1959												
8:30			1684.6	(27	DAY SHUT IN PRESSURE)							
FRIDAY, FEBRUARY 13, 1959												
2:30			1685.6	(28	DAY SHUT IN PRESSURE)							
MONDAY, FEBRUARY 16, 1959												
2:15			1686.7	(31	DAY SHUT IN PRESSURE)							
This is the maximum shut in pressure obtained.												
TUESDAY, FEBRUARY 17, 1959												
1:15			1683.6	(32	DAY SHUT IN PRESSURE)							
WEDNESDAY, FEBRUARY 18, 1959												
8:30			1683.1	(33	DAY SHUT IN PRESSURE)							

TEST COMPLETE

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

Gulf Oil Corporation

King 13

NE NE 28-21S-37E

Tubb Gas Pool

Date of Test - 12-12/23-58

200

160

120

80

40

0

20

40

60

80

100

120

140

160

SHUT IN PRESSURE (psig)

Maximum SHUT IN PRESSURE 185.8 psig

LENGTH OF SHUT IN PRESSURE (Days)

SEP. GAS API GRAVITY METER RUN ORIFICE TYPE
GRAVITY 0.680 OF LIQUID None SIZE 4" SIZE 2.50" TAPS Pipe CO₂ 0.00% H₂ 2.36%

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP Tbg.								
FRIDAY, DECEMBER 12, 1958												
11:15	1044.2		Flowing	Pressure								
11:15	WELL SHUT IN											
MONDAY, DECEMBER 15, 1958												
11:30	1335.7		(72.25 HOUR SHUT IN PRESSURE)									
TUESDAY, DECEMBER 16, 1958												
11:30	1341.2		(96.25 HOUR SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 17, 1958												
11:30	1343.3		(5 DAY SHUT IN PRESSURE)									
THURSDAY, DECEMBER 18, 1958												
11:30	1348.5		(6 DAY SHUT IN PRESSURE)									
FRIDAY, DECEMBER 19, 1958												
11:30	1352.8		(7 DAY SHUT IN PRESSURE)									
	This is the maximum shut in pressure obtained.											
MONDAY, DECEMBER 22, 1958												
11:30	1349.5		(10 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 23, 1958												
11:00	1348.0		(11 DAY SHUT IN PRESSURE)									
	TEST COMPLETE											

Tested By: R. L. West & J. D. Horton (Permian) witness: None

Gulf Oil Corporation

Mark 5

NE NE 3-22S-37E

Tubb Gas Pool

Date of Test = 11-26-58
to 1-16-59

Maximum STP
1784.2 PSIG

SHUT IN PRESSURE (psig)

LENGTH OF SHUT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE Mark WELL NO. 5WELL ON PREFLOW: DATE 11-21-58 TIME 11:00 AM WELL SHUT IN: DATE 11-26-58 TIME 11:15 AM PRESSURE TAKEN: DATE 1-14-59 TIME 10:00 AMAVG. PREFLOW RATE 2250 Mcfd LENGTH OF PREFLOW 5 Days SHUT-IN PRESS. CSG. 1781.2 TBG. _____ LENGTH OF SHUT-IN 49 Days P_c^2 3220SEP. GAS GRAVITY 0.665 API GRAVITY OF LIQUID None METER RUN SIZE 4" ORIFICE SIZE 1.75" TYPE TAPS Pipe CO₂ 0.00% H₂ 2.17%

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP Tbg.								
WEDNESDAY, NOVEMBER 26, 1958												
11:15	653.4		Flowing Pressure									
11:15	WELL SHUT IN											
FRIDAY, NOVEMBER 28, 1958												
11:15	1652.3		(48.00 HOUR SHUT IN PRESSURE)									
MONDAY, DECEMBER 1, 1958												
11:15	1721.4		(5 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 2, 1958												
11:15	1731.7		(6 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 3, 1958												
11:15	1739.0		(7 DAY SHUT IN PRESSURE)									
THURSDAY, DECEMBER 4, 1958												
11:15	1745.5		(8 DAY SHUT IN PRESSURE)									
FRIDAY, DECEMBER 5, 1958												
11:15	1749.0		(9 DAY SHUT IN PRESSURE)									
MONDAY, DECEMBER 8, 1958												
11:15	1758.7		(12 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 9, 1958												
11:00	1760.0		(13 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 10, 1958												
11:00	1761.7		(14 DAY SHUT IN PRESSURE)									
THURSDAY, DECEMBER 11, 1958												
11:00	1762.8		(15 DAY SHUT IN PRESSURE)									

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE Mark WELL NO. 5

WELL ON PREFLOW: DATE _____ TIME _____ WELL SHUT IN: DATE _____ TIME _____ PRESSURE TAKEN: DATE _____ TIME _____

AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ T8G. _____ LENGTH OF SHUT-IN _____ P_c^2 _____

SEP. GAS GRAVITY _____ API GRAVITY OF LIQUID _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL-HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP T8G.								
FRIDAY, DECEMBER 12, 1958												
11:00	1763.5		(16 DAY	SHUT	IN PRESSURE)							
MONDAY, DECEMBER 15, 1958												
11:15	1764.9		(19 DAY	SHUT	IN PRESSURE)							
TUESDAY, DECEMBER 16, 1958												
11:15	1766.1		(20 DAY	SHUT	IN PRESSURE)							
WEDNESDAY, DECEMBER 17, 1958												
11:15	1765.6		(21 DAY	SHUT	IN PRESSURE)							
THURSDAY, DECEMBER 18, 1958												
11:15	1766.3		(22 DAY	SHUT	IN PRESSURE)							
FRIDAY, DECEMBER 19, 1958												
11:15	1768.2		(23 DAY	SHUT	IN PRESSURE)							
MONDAY, DECEMBER 22, 1958												
11:15	1769.7		(26 DAY	SHUT	IN PRESSURE)							
TUESDAY, DECEMBER 23, 1958												
10:15	1770.2		(27 DAY	SHUT	IN PRESSURE)							
WEDNESDAY, DECEMBER 24, 1958												
10:15	1770.3		(28 DAY	SHUT	IN PRESSURE)							
FRIDAY, DECEMBER 26, 1958												
10:15	1772.6		(30 DAY	SHUT	IN PRESSURE)							
MONDAY, DECEMBER 29, 1958												
10:15	1773.2		(33 DAY	SHUT	IN PRESSURE)							
TUESDAY, DECEMBER 30, 1958												
10:15	1773.5		(34 DAY	SHUT	IN PRESSURE)							

See Page (3)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE Mark WELL NO. 5

WELL ON PREFLOW: DATE _____ TIME _____ WELL SHUT IN: DATE _____ TIME _____ PRESSURE TAKEN: DATE _____ TIME _____

AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ TBG. _____ LENGTH OF SHUT-IN _____ P_c^2 _____

SEP. GAS GRAVITY _____ API GRAVITY OF LIQUID _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL-HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
WEDNESDAY, DECEMBER 31, 1958												
10:15	1773.6		(35 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 2, 1959												
10:15	1775.0		(37 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 5, 1959												
10:45	1775.2		(40 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 6, 1959												
10:45	1776.0		(41 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 7, 1959												
10:45	1778.7		(42 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 8, 1959												
11:45	1777.2		(43 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 9, 1959												
10:30	1777.6		(44 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 12, 1959												
11:00	1779.2		(47 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 13, 1959												
10:00	1780.5		(48 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 14, 1959												
10:00	1781.2		(49 DAY SHUT IN PRESSURE)									
This is the maximum shut in pressure obtained.												
THURSDAY, JANUARY 15, 1959												
10:15	1781.0		(50 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 16, 1959												
10:30	1780.9		(51 DAY SHUT IN PRESSURE)									
TEST COMPLETE												

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

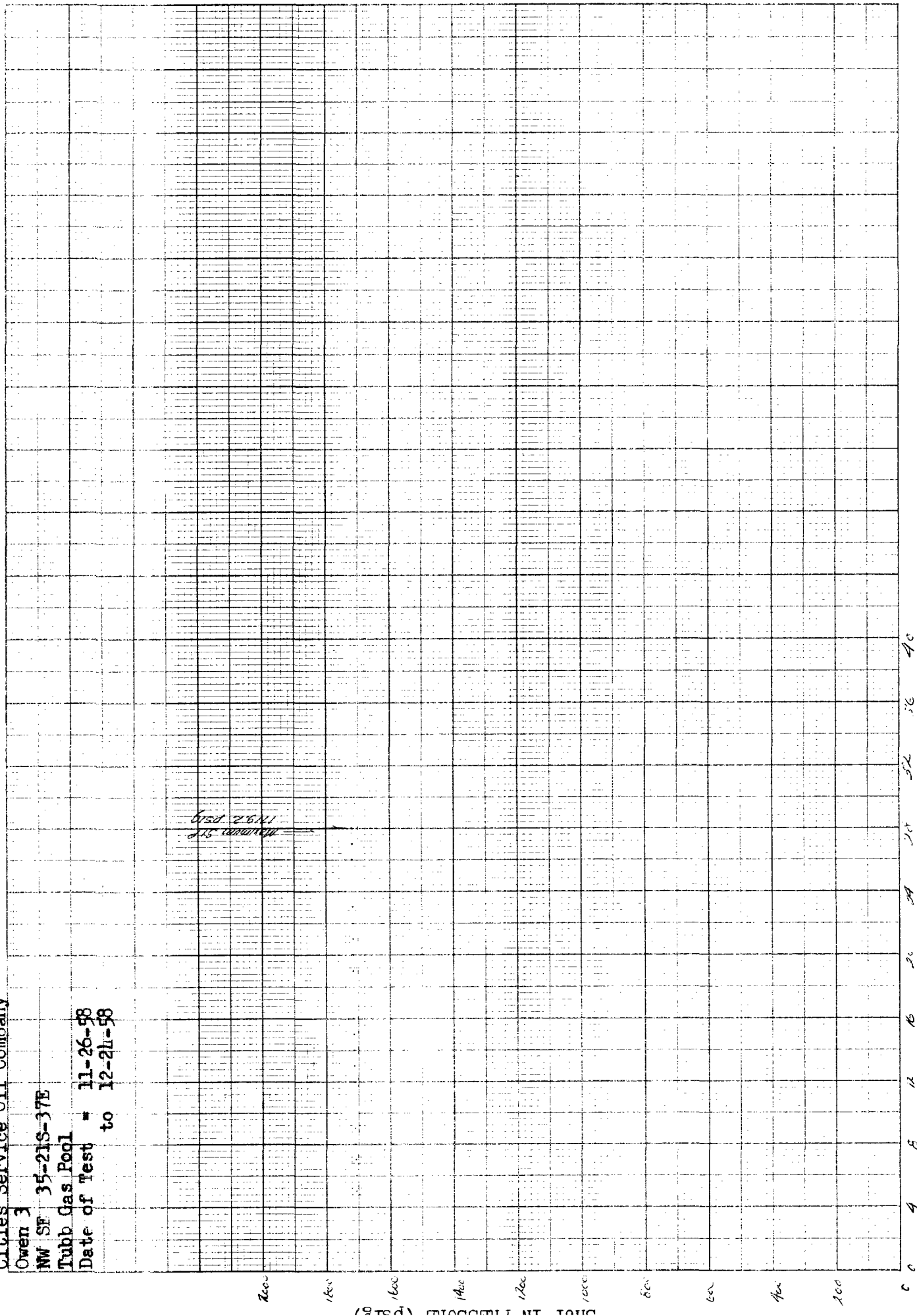
Cities Service Oil Company

Owen 3

NW SE 35-21S-37E

Tubb Gas Pool

Date of Test = 11-26-58
to 12-24-58



TREND OF SHUT IN PRESSURE (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY Cities Service Oil Company LEASE Owen WELL NO. 3

WELL ON PREFLOW: DATE 11-20-58 TIME 10:00 AM WELL SHUT IN: DATE 11-26-58 TIME 11:45 AM PRESSURE TAKEN: DATE 12-24-58 TIME 10:30 AM

AVG. PREFLOW RATE 1600 Mcfd LENGTH OF PREFLOW 6 Days SHUT-IN PRESS. CSG. 1719.2 TBG. LENGTH OF SHUT-IN 28 Days P_c^2 3001

SEP. GAS GRAVITY 0.685 API GRAVITY OF LIQUID None METER RUN SIZE 4" ORIFICE SIZE 2.00" TYPE TAPS Pipe CO_2 0.03% H_2 1.80%

TIME OF DAY	W.H. FLOWING PRESS.				WELL- HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
WEDNESDAY, NOVEMBER 26, 1958												
11:45	718.5		Flowing Pressure									
11:45	WELL SHUT IN											
FRIDAY, NOVEMBER 28, 1958												
11:45	1686.7		(18.00 HOUR SHUT IN PRESSURE)									
MONDAY, DECEMBER 1, 1958												
11:00	1704.6		(5 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 2, 1958												
11:00	1706.7		(6 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 3, 1958												
11:00	1708.2		(7 DAY SHUT IN PRESSURE)									
THURSDAY, DECEMBER 4, 1958												
11:00	1709.9		(8 DAY SHUT IN PRESSURE)									
FRIDAY, DECEMBER 5, 1958												
11:00	1710.5		(9 DAY SHUT IN PRESSURE)									
MONDAY, DECEMBER 8, 1958												
11:00	1712.7		(12 DAY SHUT IN PRESSURE)									
TUESDAY, DECEMBER 9, 1958												
10:45	1713.1		(13 DAY SHUT IN PRESSURE)									
WEDNESDAY, DECEMBER 10, 1958												
10:45	1713.0		(14 DAY SHUT IN PRESSURE)									
THURSDAY, DECEMBER 11, 1958												
10:45	1714.2		(15 DAY SHUT IN PRESSURE)									

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY Cities Service Oil Company LEASE Owen WELL NO. 3

WELL ON PREFLOW: _____ WELL SHUT IN: _____ PRESSURE TAKEN: _____
DATE _____ TIME _____ DATE _____ TIME _____ DATE _____ TIME _____

AVG. PREFLOW _____ LENGTH OF _____ SHUT-IN _____ LENGTH OF _____
 RATE _____ PREFLOW _____ PRESS. CSG. _____ TBG _____ SHUT-IN _____ P. 2 _____

SEP. GAS _____ API GRAVITY _____ METER RUN _____ GRIFICE _____ TYPE _____
GRAVITY _____ OF LIQUID _____ SIZE _____ SIZE _____ TAPS _____ CO₂ _____ H₂ _____

[illegible]

Tested By: R. L. West & J. D. Horton (Permian) witness: None

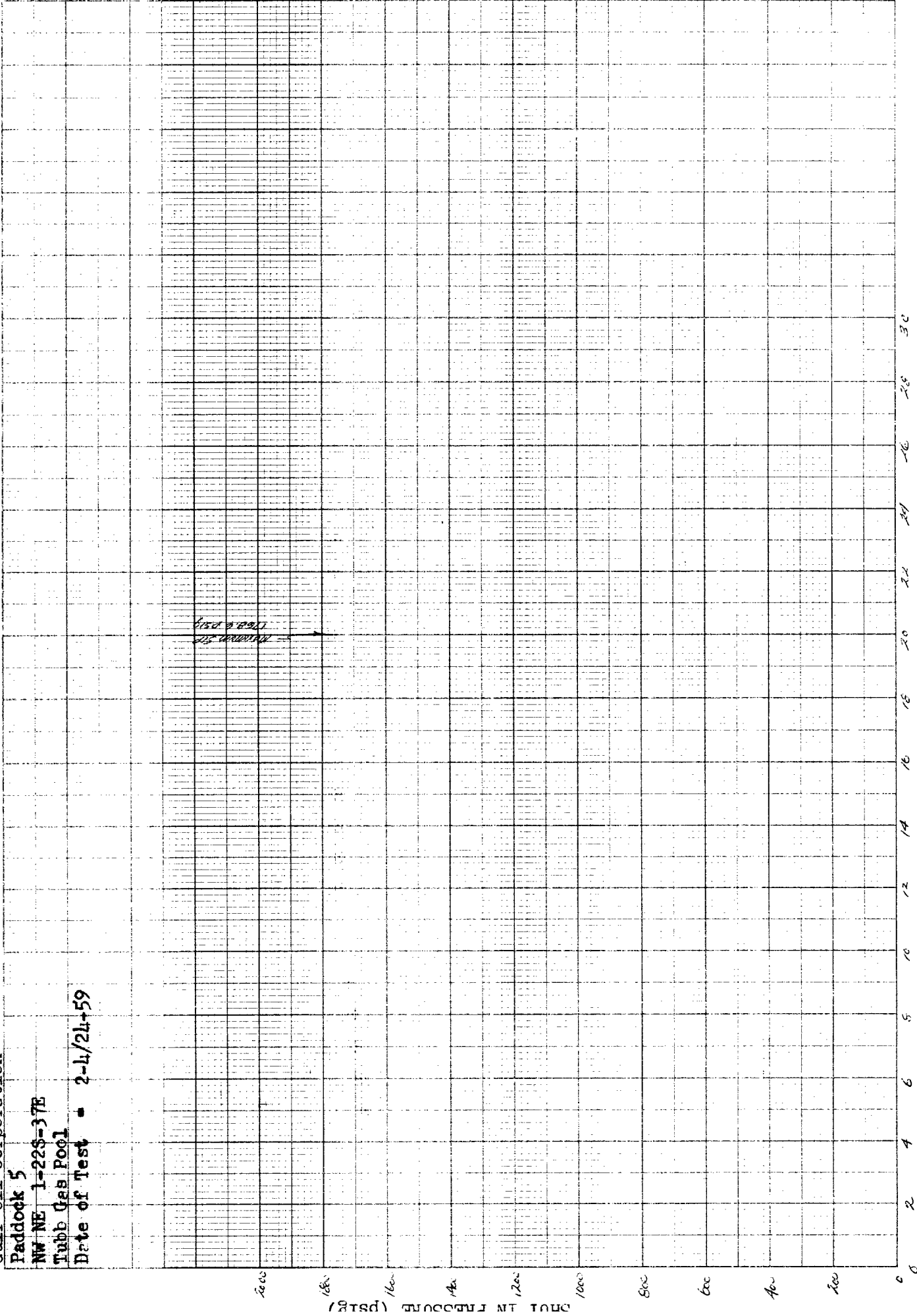
Gulf Oil Corporation

Paddock 5

NW NE 1-228-37E

Tubb Gas Pool

Date of Test - 2-4/24-59



LENGTH OF SHIFT IN DAYS (Days)

BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE Alice Paddock WELL NO. 5WELL ON PREFLOW: DATE 1-31-59 TIME 11:00 AM WELL SHUT IN: DATE 2-4-59 TIME 8:00 AM PRESSURE TAKEN: DATE 2-24-59 TIME 10:30 AMAVG. PREFLOW RATE 4100 Mcfd LENGTH OF PREFLOW 4 Days SHUT-IN PRESS. CSG. 1768.6 TBQ. _____ LENGTH OF SHUT-IN 20 Days P_c^2 3175SEP. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	BBLS. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBQ.								
WEDNESDAY, FEBRUARY 4, 1959												
8:00	WELL SHUT IN											
FRIDAY, FEBRUARY 6, 1959												
9:00	1501.4		(49.00 HOUR SHUT IN PRESSURE)									
MONDAY, FEBRUARY 9, 1959												
9:30	1667.0		(5 DAY SHUT IN PRESSURE)									
TUESDAY, FEBRUARY 10, 1959												
9:00	1681.2		(6 DAY SHUT IN PRESSURE)									
WEDNESDAY, FEBRUARY 11, 1959												
8:30	1696.2		(7 DAY SHUT IN PRESSURE)									
THURSDAY, FEBRUARY 12, 1959												
8:45	1707.3		(8 DAY SHUT IN PRESSURE)									
FRIDAY, FEBRUARY 13, 1959												
2:45	1719.7		(9 DAY SHUT IN PRESSURE)									
MONDAY, FEBRUARY 16, 1959												
2:00	1742.1		(12 DAY SHUT IN PRESSURE)									
TUESDAY, FEBRUARY 17, 1959												
1:45	1746.8		(13 DAY SHUT IN PRESSURE)									
WEDNESDAY, FEBRUARY 18, 1959												
9:00	1751.2		(14 DAY SHUT IN PRESSURE)									
THURSDAY, FEBRUARY 19, 1959												
3:00	1755.8		(15 DAY SHUT IN PRESSURE)									
THESDAY, FEBRUARY 24, 1959												
10:30	1768.6		(20 DAY SHUT IN PRESSURE)									

This is the maximum shut in pressure obtained.

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY Gulf Oil Corporation LEASE Alice Paddock WELL NO. 5

WELL ON PREFLOW: _____ WELL SHUT IN: _____ PRESSURE TAKEN: _____
DATE _____ TIME _____ DATE _____ TIME _____ DATE _____ TIME _____

AVG. PREFLOW RATE _____ LENGTH OF PREFLOW _____ SHUT-IN PRESS. CSG. _____ TBG _____ LENGTH OF SHUT-IN _____ P_c^2 _____

SEP. GAS _____ API GRAVITY _____ METER RUN _____ ORIFICE _____ TYPE _____
GRAVITY _____ OF LIQUID _____ SIZE _____ SIZE _____ TAPS _____ CO₂ _____ N₂ _____

[illegible]

Tested By: R. L. West & J. D. Horton (Permian) witness: None

Pan American Petroleum Corporation

W. H. Turner 3-T

SE SE 29-21S-37E

Tubt Gas Pool

Date of Test = 12-21/29-58

Pressure 410
1000.0 psig

5000
1800
1600
1400
1200
1000
800
600
400
200
0

CHOL IN PRESSURE (PSIG)

0 1 2 3 4 5 6 7 8 9 10

LENGTH OF SHUT IN PRESSURE (Days)

SEPL GAS _____ API GRAVITY _____ METER RUN _____ GRIFFICE _____ TYPE _____
GRAVITY 0.680 OF LIQUID None SIZE 4" SIZE _____ TAPS Pipe CO, 0.12% N, 2.73%

[illegible]

Tested By: R. L. West & J. D. Horton (Permian) witness: None

The Ohio Oil Company

Worham 11

SE NW 11-22S-37E

Tubb Gas Pool

Date of Test = 1-4-59
to 2-6-59

SHUT IN PRESSURE (psig)

0 4 8 12 16 20 24 28 32 36 40

LENGTH OF SHUT IN PRESSURE (Days)

MAXIMUM SHUT IN PRESSURE 1804.9 PSIG

BACK-PRESSURE TEST WORKSHEET

COMPANY The Ohio Oil Company LEASE Wortham WELL NO. 11WELL ON PREFLOW: DATE 12-29-58 TIME 10:00 AM WELL SHUT IN: DATE 1-4-59 TIME 9:45 AM PRESSURE TAKEN: DATE 2-4-59 TIME 9:30 AMAVG. PREFLOW RATE 3000 Mcfd LENGTH OF PREFLOW 6 Days SHUT-IN PRESS. CSG. 1804.9 TQG. _____ LENGTH OF SHUT-IN 31 Days P_c^2 3305SEP. GAS GRAVITY _____ API GRAVITY _____ METER RUN SIZE _____ ORIFICE SIZE _____ TYPE TAPS _____ CO_2 _____ H_2 _____

TIME OF DAY	W.H. FLOWING PRESS.				WELL-HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	BBL'S. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP Tbg.								
SUNDAY, JANUARY 4, 1959 9:45	WELL SHUT IN											
MONDAY, JANUARY 5, 1959 10:00	1500.0		(24.25 HOUR SHUT IN PRESSURE)									
TUESDAY, JANUARY 6, 1959 10:00	1596.9		(48.15 HOUR SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 7, 1959 9:45	1646.2		(72.00 HOUR SHUT IN PRESSURE)									
THURSDAY, JANUARY 8, 1959 11:15	1677.0		(97.50 HOUR SHUT IN PRESSURE)									
FRIDAY, JANUARY 9, 1959 12:00	1699.6		(5 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 12, 1959 10:15	1738.2		(8 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 13, 1959 9:30	1747.2		(9 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 14, 1959 9:30	1754.2		(10 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 15, 1959 10:00	1760.5		(11 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 16, 1959 10:15	1765.7		(12 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 19, 1959 10:00	1779.7		(15 DAY SHUT IN PRESSURE)									

See Page (2)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

BACK-PRESSURE TEST WORKSHEET

COMPANY The Ohio Oil Company LEASE Wortham WELL NO. 11

WELL ON PREFLOW: WELL SHUT IN: PRESSURE TAKEN:
DATE TIME DATE TIME DATE TIME

AVG. PREFLOW RATE LENGTH OF PREFLOW SHUT-IN PRESS. CSG. TBG. LENGTH OF SHUT-IN P_c^2

SEP. GAS GRAVITY API GRAVITY OF LIQUID METER RUN SIZE ORIFICE SIZE TYPE TAPS CO_2 H_2

TIME OF DAY	W.H. FLOWING PRESS.				WELL HEAD TEMP.	METER OR PROVER PRESS.	DIFF.	METER OR PROVER TEMP.	Bbls. OF LIQUID	P_t^2	$P_c^2 - P_t^2$	Q
	CASING Psig	ΔP Csg.	TUBING Psig	ΔP TBG.								
TUESDAY, JANUARY 20, 1959												
10:00	1782.7		(16 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 21, 1959												
10:15	1784.8		(17 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 22, 1959												
9:45	1788.7		(18 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 23, 1959												
9:30	1790.6		(19 DAY SHUT IN PRESSURE)									
MONDAY, JANUARY 26, 1959												
9:30	1796.3		(22 DAY SHUT IN PRESSURE)									
TUESDAY, JANUARY 27, 1959												
9:30	1799.4		(23 DAY SHUT IN PRESSURE)									
WEDNESDAY, JANUARY 28, 1959												
9:30	1798.5		(24 DAY SHUT IN PRESSURE)									
THURSDAY, JANUARY 29, 1959												
9:30	1800.0		(25 DAY SHUT IN PRESSURE)									
FRIDAY, JANUARY 30, 1959												
9:30	1800.7		(26 DAY SHUT IN PRESSURE)									
TUESDAY, FEBRUARY 3, 1959												
10:00	1803.6		(30 DAY SHUT IN PRESSURE)									
WEDNESDAY, FEBRUARY 4, 1959												
9:30	1804.9		(31 DAY SHUT IN PRESSURE)									
	This is the maximum shut in pressure obtained.											

See Page (3)

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

SEPT. GAS _____ API GRAVITY _____ METER RUN _____ ORIFICE _____ TYPE _____
GRAVITY _____ OF LIQUID _____ SIZE _____ SIZE _____ TAPS _____ CO₂ _____ H₂ _____

[illegible]

Tested By: R. L. West & J. D. Horton (Permian) Witness: None

" THESE ARE THE ONLY COPIES SENT TO YOUR COMPANY."

Hobbs, New Mexico
June 5, 1957

To: Operators in Tubb Gas Pool

Subject: Minutes of the Tubb Gas Pool Industry Committee Meeting of May 29, 1957.

You will recall Mr. Porter's memorandum of January 28, 1957, concerning the appointment of an Industry Committee for a study and recommendations concerning rules for oil wells recently completed in the Tubb Gas Pool. Mr. Porter's memorandum is quoted in part as follows:

"Due to the recent completion of several oil wells in the Tubb formation within the horizontal limits of the Tubb Gas Pool, the Commission feels that consideration should be given to the matter of the adoption of rules governing the operation of such wells. In order that the Commission may have the most complete information available for use in the formulation of such rules, the following operators of wells in the Tubb Pool have been appointed to an Industry Committee with instructions to prepare and make recommendations to the Commission at a hearing to be held on March 14, 1957.

Amerada Petroleum Corporation
Continental Oil Company
Humble Oil & Refining Company
Ohio Oil Company
Shell Oil Company
N. G. Penrose, Incorporated
Gulf Oil Corporation
Samedan Oil Corporation

"Commission Staff Members appointed to work with the Committee are Mr. Montgomery, Mr. Fischer, and Mr. Runyun."

This committee has been quite active in an effort to fulfill the charge assigned it by the Commission and from the meeting of May 3, 1957, there developed two proposed plans for regulation of these specific wells in the Tubb Gas Pool. You will also recall that at the May 16th hearing, continuation of Case 1221 to the July Statewide hearing was requested of the Commission. This letter is to apprise you of the Committee's work conducted on May 29, 1957, which was concerned mainly with the formulation of final recommendations to be made to the Commission at the July hearing.

The two plans, one offered by Humble Oil and Refining Company and amended by the Industry Committee, and the other proposed by Continental Oil Company, are attached.

In considering adoption of the Humble plan, the Industry Committee voted as follows:

Amerada	Yes	Continental	Abstained
Humble	Yes	Penrose	Absent
Gulf	Yes	Ohio	Yes
Shell	No	Samedan	No

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In considering adoption of the plan submitted by Continental, the voting results were as follows:

Amerada	No	1	no
Continental	Abstained		
Gulf	No	2	yes
Humble	No	1	about
Penrose	Absent	1	astained
Shell	Yes		
Samedan	Yes		
Ohio	No		

Following the voting presented above, Continental made the following statement in expressing their views in this matter. In general, Continental is in favor of;

- (1) Classifying all wells as gas wells.
- (2) Place a gas allowable on all wells as now in effect.
- (3) Place a liquid limit on each well equivalent to the basic unit allowable of an oil well for the depth of 6000' to 7000'.

By majority vote, although not unanimous, the Humble plan was selected for recommendation to the Commission.

Another matter which Mr. Porter asked the Industry Committee to consider was the necessity of continued proration in the Byers-Queen Gas Pool. The Industry Committee will recommend to the Commission that proration in the Byers-Queen Gas Pool be discontinued.

In presenting the work of the Committee to the Commission the Chairman will make general comment relating the contention that the Tubb Gas Pool is primarily a gas pool and will present the recommendations of the Committee, which are;

- (1) Humble's plan as ammended by the Committee.
- (2) Abolish proration of Byers-Queen Gas.

Geologists of Ohio Oil Company and Gulf Oil Corporation will present for the Commissions record, the Geological work done by Mr. Runyon, Commission Staff Geologist, and make general statements pertaining to same.

C. M. BUMPASS
Chairman Industry Committee
Tubb Gas Pool

CC: To All Tubb Pool Operators
Oil Conservation Commission
Att: Mr. A.L. Porter, Jr.
Box 871 Santa Fe, New Mexico
OCC— Hobbs, N.M.
Att: Mr. R. F. Montgomery

TUBB GAS POOL

Following are the proposed changes in Order No. R-586 as proposed by Humble Oil & Refining Company as amended by the Industry Committee:

1. Item 7 will be added to Rule 5 (d): "In the event more than one gas well producing from the Tubb Gas Pool should be included in a standard or less than a standard proration unit, the sum of the allowables allocated to the wells shall be equivalent to that volume of gas allocated to a proration unit of the same size. The operator of such wells shall have the option to determine the proportion of the assigned allowable to be produced by each individual well, provided all of said wells are orthodox gas locations. In the event that one or more of the gas wells on the proration unit is an unorthodox location, the Commission shall establish the proportion of the assigned allowable to be produced from each individual well."

2. The third from last paragraph of Rule 8 will be revised to read as follows: "The allowable assigned to any well capable of producing its normal gas allowable in the Tubb Gas Pool shall be the same proportion of the total remaining allowable allocated to the said pool after deducting allowables of marginal wells that the number of acres contained in the gas proration unit for that well bears to the acreage contained in all gas proration units assigned to non-marginal wells in the Tubb Gas Pool except that no well which produces liquid hydrocarbons with a gravity of 45 degrees API or less regardless of the size of the proration unit will be permitted to produce more liquid hydrocarbons than the Statewide oil allowable for wells on 40-acre units producing at depths between 6,000 and 7,000 feet. Any well subject to such limitation shall be so designated on the Commission's monthly allocation schedule of condensate and other incidental liquid hydrocarbons. Any well subject to this liquid hydrocarbon limitation and which produces more than the allowed volume of liquid hydrocarbons during any 1 month will make up such overage. Any gas production shortage resulting from application of the liquid hydrocarbon limitation or from shutting in a well because of overproduction of liquid hydrocarbons may be made up under the terms of Rule 9 (underproduction balancing provision) provided the liquid hydrocarbon limits described herein are not exceeded."

3. A rule 8a will be added as follows: "Tests to determine the gravity of the liquid hydrocarbons recovered from each well in the Tubb Gas Pool shall be taken following adoption of these rules and reported to the Commission on Form C-116 not later than the 15th day of the next succeeding month following adoption of these rules. The Commission will then mark on the allocation schedule of condensate and other incidental liquid hydrocarbons the wells which are to be subject to the liquid hydrocarbon limitation. Thereafter, gravity tests on each well not subject to the liquid hydrocarbon limitation will be made during the months of January and February and reported to the Commission on Form C-116 not later than the 15th day of March."

TUBB GAS POOL

Continental's proposed plan for recommendation to the Commission is as follows:

1. The committee has made a study and finds that there is no regulatory problem resulting from liquid production in the Tubb Gas Pool at present.
2. The committee recommends that all wells in the Tubb Pool be classified as gas wells and prorated on the basis of the volume of gas produced, in accordance with present rules and that no limit be placed on liquid production.
3. The committee recommends that should liquid production from the Tubb Pool become a problem in the future that a study be made at that time to determine appropriate action.

Those present were as follows:

J. H. Moore	Continental Oil Company	Roswell, New Mexico
C. R. Smith	Continental Oil Company	Eunice, New Mexico
V. T. Lyon	Continental Oil Company	Roswell, New Mexico
V. R. Cammack	Atlantic Refining Company	Midland, Texas
R. E. Layne	Samedan Oil Corporation	Hobbs, New Mexico
A. K. Palmer	Shell Oil Company	Hobbs, New Mexico
W. G. Abbott	Amerada Petroleum Corporation	Monument, New Mexico
J. J. Riha	Ohio Oil Company	Midland, Texas
D. E. Morris	Ohio Oil Company	Midland, Texas
Jack Cooley	Oil Conservation Commission	Santa Fe, New Mexico
R. F. Montgomery	Oil Conservation Commission	Hobbs, New Mexico
Eric Engbrecht	Oil Conservation Commission	Hobbs, New Mexico
J. W. Runyan	Oil Conservation Commission	Hobbs, New Mexico
R. C. Heald, Jr.	Humble Oil & Rfg. Company	Midland, Texas
H. B. Wofford, Jr.	Gulf Oil Corporation	Roswell, New Mexico
G. A. Swartz	Gulf Oil Corporation	Roswell, New Mexico
C. M. Bumpass	Gulf Oil Corporation	Hobbs, New Mexico

PERMIAN BASIN PIPELINE COMPANY

SOUTHEAST NEW MEXICO

TUBE GAS POOL

<u>Company - Well & No.</u>	<u>Unit</u>	<u>S-T-R</u>	<u>No. of Days on Line</u>	<u>Volume</u>	<u>Average Daily Rate of Flow</u>
<u>AMERADA PETROLEUM CORPORATION</u>					
** Baker 3 T	I	10-22-37	18	*22 380	1 243
Corrigan 4	A	4-22-37	31	18 895	610
Hare 7	M	33-21-37	30	31 043	1 035
State D A 3	J	16-21-37	30	34 330	1 144
Wood 7	A	22-22-37	27	10 865	402
<u>CITIES SERVICE OIL COMPANY</u>					
Brunson C 6	I	3-22-37	30	28 014	934
Owen 3	J	35-21-37	22	34 803	1 582
<u>GULF OIL CORPORATION</u>					
Amanda 1 T	J	25-22-37	31	10 187	329
Andrews 2 T	G	32-22-38	30	30 092	1 003
Carson C 3	P	28-21-37	30	22 513	750
Danglade 1	M	13-22-37	30	33 091	1 103
Eaves 5	H	10-22-37	12	19 552	1 629
Eubank 1	B	22-21-37	30	26 200	873
Gulf State 1 (W.O.F.)	A	36-22-37	19	13 363	703
Gutman 1 T	N	19-22-38	31	34 838	1 124
Gutman 2 T	C	19-22-38	14	26 935	1 910
Hugh 4	A	14-22-37	7	24 665	3 524
Hugh 7 T	C	14-22-37	30	40 966	1 366
King 13	A	28-21-37	7	40 863	5 838
** King 22	C	28-21-37	2	*17 100	8 550
Leonard 4 T	A	16-21-37	11	24 380	2 216
Mark 5	A	3-22-37	31	29 806	961
McCormack 7	I	32-21-37	31	9 338	301
Owen 5	P	34-21-37	30	34 436	1 148
Vivian 1	C	30-22-38	10	9 791	979
Watkins 1	O	29-22-38	16	7 365	460
<u>MAGNOLIA PETROLEUM COMPANY</u>					
Brunson Argo 6 T	E	10-22-37	31	6 446	208
Carson 8 T	F	33-21-37	19	34 422	1 812
Corrigan 7 T	P	33-21-37	15	3 002	200
** Long 8 T	J	11-22-37	5	*11 710	2 342
Williamson 1 T	A	23-21-37	31	2 790	90
<u>THE OHIO OIL COMPANY</u>					
Butler 3 (Cosden)	N	18-22-38	30	8 829	294
Lynch 4 T	D	1-22-37	5	13 656	2 731
Marshall B 2	M	27-21-37	31	18 591	600
Owen 3	N	35-21-37	30	26 260	875
Warlick C 1	J	15-21-37	25	49 946	1 998
Worthan 9 T	E	11-22-37	16	10 761	673
Worthan 11	N	11-22-37	10	46 654	4 665
<u>PAN AMERICAN PETROLEUM CORP.</u>					
Owen B 2	L	34-21-37	30	37 624	1 254
Southland Royalty A 2	B	9-21-37	19	33 138	1 744
Southland Royalty A 4	X	4-21-37	6	24 116	4 019
State C 6X	C	16-21-37	4	14 357	3 589
State C 8	D	36-21-37	20	39 190	1 960
** Turner 3	F	29-21-37	13	*30 870	2 375
<u>NEVILLE G. PENROSE, INC.</u>					
Hinton 3 T	N	12-22-37	12	31 534	2 628
Hinton 5	P	12-22-37	30	25 465	849
<u>ROWAN OIL COMPANY</u>					
Walden 3 T	C	15-22-37	31	4 688	151

<u>Company - Well & No.</u>	<u>Unit</u>	<u>S-T-R</u>	<u>No. of Days on Line</u>	<u>Volume</u>	<u>Average Daily Rate of Flow</u>
<u>SINCLAIR OIL & GAS COMPANY</u>					
** Barton 1	G	23-21-37	15	*45 810	3 054
** Cone A 1	M	26-21-37	10	*34 490	3 449
State 367 3 T	K	36-21-37	31	8 984	290
<u>SKELLY OIL COMPANY</u>					
Baker B 15 T	J	10-22-37	18	51 701	2 872
<u>SUNRAY MID-CONTINENT OIL CO.</u>					
** Elliott A 2	H	21-21-37	5	* 9 420	1 884
Linam V 3	A	29-21-37	30	36 701	1 223
State 15 4	F	16-21-37	18	46 177	2 565
<u>THE TEXAS COMPANY</u>					
** Blinebry 7	G	19-22-38	11	*31 650	2 877

** Data obtained from month's production other than January 1957.

* Estimated volumes.

TUBB GAS POOL

Following are the proposed changes in Order No. R-586:

1. Item 7 will be added to Rule 5 (d): "In the event more than one gas well producing from the Tubb Gas Pool should be included in a standard or less than a standard proration unit, the sum of the allowables allocated to the wells shall be equivalent to that volume of gas allocated to a proration unit of the same size. The operator of such wells shall have the option to determine the proportion of the assigned allowable to be produced by each individual well, provided all of said wells are orthodox gas locations. In the event that one or more of the gas wells on the proration unit is an unorthodox location, the Commission shall establish the proportion of the assigned allowable to be produced from each individual well."

2. The third from last paragraph of Rule 8 will be revised to read as follows: "The allowable assigned to any well capable of producing its normal gas allowable in the Tubb Gas Pool shall be the same proportion of the total remaining allowable allocated to said pool after deducting allowables of marginal wells that the number of acres contained in the gas proration unit for that well bears to the acreage contained in all gas proration units assigned to non-marginal wells in the Tubb Gas Pool except that no well which produces liquid hydrocarbons with a gravity of 45° API or less regardless of the size of the proration unit will be permitted to produce more liquid hydrocarbons than the Statewide oil allowable for wells on 40-acre units producing at depths between 6,000 and 7,000 feet. Any well subject to such limitation shall be so designated on the Commission's monthly allocation schedule of condensate and other incidental liquid hydrocarbons. Any well subject to this liquid hydrocarbon limitation and which produces more than the allowed volume of liquid hydrocarbons during any one month will make up such overage. Any gas production shortage resulting from application of the liquid hydrocarbon limitation or from shutting in a well because of overproduction of liquid hydrocarbons may be made up under the terms of Rule 9 (underproduction balancing provision) provided the liquid hydrocarbon limits described herein are not exceeded."

3. A rule 8b will be added as follows: "Tests to determine the gravity of the liquid hydrocarbons recovered from each well in the Tubb Gas Pool shall be taken following adoption of these rules and reported to the Commission on Form C-116 not later than the 15th day of the next succeeding month following adoption of these rules. The Commission will then mark on the allocation schedule of condensate and other incidental liquid hydrocarbons the wells which are to be subject to the liquid hydrocarbon limitation. Thereafter, gravity tests on each well not subject to the liquid hydrocarbon limitation will be made during the months of January and February and reported to the Commission on Form C-116 not later than the 15th day of March."

GAS LIQUID RATIO TESTS IN THE TUBB GAS POOL-OCTOBER 1956 TESTS

OPERATOR				
Lease Name Well No.	S-T-R	Date of Test	Condensate Gravity-°	Gas Cond. Ratio
AMERADA PET. CORP.				
Baker #3-I	10-22-37	11/24/56	65	51,675
Corrigan #4-A	4-22-37	11/24/56	62	35,546
Hare #7-M	33-21-37	11/22/56	67	78,252
State D"A" #3-J	16-21-37	11/24/56	60	75,708
E. Wood #7-A	22-22-37	11/24/56	49	16,423
CITIES SERVICE OIL CO.				
Brunson "B" #3-M	3-22-37	11/15/56	----(si-no pc)	9,070
Brunson "C" #6-I	3-22-37	11/15/56	62.7	86,000
Owen #3-J	35-21-37	11/15/56	62.3	41,509
State S #2-F	15-21-37	11/16/56	64.0	18,913
CONE, J. R.				
Anderson #1-I	21-21-37	1/26/57	71.5	167,040
CONTINENTAL OIL CO.				
Hawk B-3 #1-T	3-21-37	1/17/57	37	1,236 (Oil Well)
Hawk B-9 #3-C	9-21-37	1/12/57	53	63,727
Hawk B-9 #5-K	9-21-37	1/15/57	---	-----
Hawk B-9 #7-P	9-21-37	1/2/57	55	12,388
Lockhart A-27 #1-D	27-21-37	1/11/57	63	66,388
Lockhart A-27 #1-G	27-21-37	1/12/57	63	102,285
Lockhart A-35 #3-C	35-21-37	1/13/57	56	37,800
Lockhart B-35 #1-G	35-21-37	1/12/57	56	24,500
Nolan #2-N	11-21-37	1/9/57	44	26,200
State 10 #3-D	10-21-37	1/12/57	54	614,000
Wantz D-21 #3-J	21-21-37	1/21/57	54	61,000
Wantz D-21 #4-K	21-21-37	1/12/57	54	42,200
COSDEN PET. CORP.				
E. Butler #3-N	18-22-38	12/4/56 (csg.-tbg.)	66.3	59,523
		12/8/56	66.3	62,791
GREENBRIER OIL CO.				
Sarkeys #1-B	26-21-37	12/14/56	77.2	61,304
GULF OIL CORP.				
Amanda #1-J	25-22-37	11/21/56	69	97,640
Andrews #2-G	32-22-38	11/22/56	71.8	42,770
Carson "C" #3-P	28-21-37	11/26/56	73.4	29,929
Danglade #1-M	13-22-37	11/22/56	71.3	44,952
Eaves #5-H	10-22-37	11/26/56	68.9	31,813
Eubank #1-B	22-21-37	11/22/56	67.6	49,307
Gutman #1-N	19-22-38	12/10/56	65.5	104,350
Gutman #2-C	19-22-38	11/20/56	68.1	29,336
Hugh #4-O	14-22-37	12/3/56	67.9	41,247
Hugh #7-C	14-22-37	11/26/56	60.5	46,283
E. King #13-A	28-21-37	No connection		
E. King #22-C	28-21-37	11/23/56	70	44,283
Leonard "E" #4-A	16-21-37	11/22/56	66.8	62,068
Mark #5-A	3-22-37	11/26/56	72.8	19,091
M. Owen #5-A	34-21-37	11/26/56	68.4	40,024
McCormack #7-I	32-21-37	11/21/56	70.6	31,844
Paddock #3-P	1-22-37	12/4/56	52.6	21,412
Vivian #1-C	20-22-38	11/20/56	61.9	41,896
Watkins #1-O	29-22-38	11/20/56	61.9	52,617
HUMBLE OIL & REFINING CO.				
Blinebry Tubb Gas Unit #1-O	10-21-37	12/8/56	56.4	51,057
Hardison B #1-H	34-21-37	10/15/56	61.6	48,843
Hardison B #7-P	27-21-37	11/5/56	69.1	61,771
Penrose #2-H	13-22-37	12/10/56	70	46,483
N. M. State S #12-A	2-22-37	12/12/56	45.2	45,601
N. M. State S #13-B	2-22-37	11/3/56	68.6	48,347
N. M. State S #20-E	2-22-37	12/8/56	66.5	63,869
N. M. State S #21-L	2-22-37	12/6/56	67.9	50,961
N. M. State S #23-P	2-22-37	11/8/56	68.5	37,019
N. M. State V #7-N	10-21-37	12/6/56	36.4	2,563 (Oil)

OPERATOR	Lease Name Well No.	S-T-R	Date of Test	Condensate Gravity-O	Gas Cond. Ratio
N. B. HUNT	Weatherly E-1-G	21-21-37	11/21/56	67	74,000
MAGNOLIA PET. CO.	Boushon Argo #5-E	10-22-37	1/14/57	63.8	30,350
	Garson #3-F	33-21-37	1/14/57	67.8	47,000
	Garson #19-L	26-21-37	1/14/57	70.0	57,200
	Corrigan #7-P	33-21-37	1/14/57	64.0	125,500
	Williamson #1-A	23-21-37	1/14/57	61	30,000
	Long #8-J	11-22-37	1/14/57	66	-----
MARKHAM, CONE AND REDFERN	Esbanks #2-L	14-21-37	12/9/56	72	124,542
MORAN OIL PRODUCING & DRILG. CORP.	Owen #1-E	14/21/37	12/14/56 12/5/56	54.2 59.8	42,633 42,633
OHIO OIL COMPANY	Lynch #1-D	1-22-37	11/29/56	66.4	39,664
	Marshall "B" #2-M	27-21-37	12/6/56	70.5	84,579
	J. L. Muncy #1-P	24-22-37	11/29/56	66.8	83,978
	M. Owen #3-N	35-21-37	11/2/56	70.8	51,379
	L. G. Warlick "C" #1-J	15-21-37	12/7/56	68.3	67,489
	Worthington #9-E	11-22-37	11/29/56	68.1	34,366
	Worthington #11-F	11-22-37	12/7/56	72.4	36,260
R. OLSEN	Sarkeys #1-E comp. 1/8/57	26-21-37			(Oil)
R. OLSEN OIL COMPANY	Boyd #5-B	23-22-37	10/26/56	60.9	51,260 (?)
	Cone #1-J	26-21-37	11/15/56	65	79,960
	Owens #1-M	25-21-37	11/15/56	56	33,700
PENROSE, NEVILLE G.	Hinton #3T-N	12-22-37	12/19/56	67.8	58,490
	Hinton #5-P	12-22-37	12/5/56	67.1	64,284
	Elliott Hinton #1-E	12-22-37			No p c
ROWAN OIL COMPANY	Walden #3-T C	15-22-37	12/12/56	----tstm	150,000
SAMEDAN OIL CORP.	Parks "A" #4-O	14-22-37	12/2/56	58	39,585
	Parks #6-P	14-22-37	12/2/56	56	40,745
SHELL OIL COMPANY	Argo #1-M	15-21-37	1/11/57	63.8	108,382
	Argo A #1-D	22-21-37	1/9/57	69.6	315,393
	Long #5-N	11-22-37	1/11/57	60.4	61,709
	Sarkeys #1-M	23-21-37	1/9/57	68.2	114,505
	State 15 #1-C	15-21-37	1/9/57	56.5	30,484
	Turner #2-L	22-21-37	1/9/57	72	62,075
	Turner #3-J	22-21-37	1/11/57	68.7	53,774
SINCLAIR OIL & GAS CO.	Alexander Rogers #2-A	12-22-37	11/8/56	43.9	1892(Oil Well)
	State 367 #3-N	36-21-37	11/8/56	53.1	19,924
	Sarkeys #2-O	23-21-37	11/9/56	70	81,950
SKELLY OIL COMPANY	Baker B #15-J	10-22-37	12/12/56	72	71,489

OPERATOR				
Lease Name Well No.	S-T-R	Date of Test	Condensate Gravity [°]	Gas Cond. Ratio
STANOLIND (PAN AMERICAN PET. CORP.)				
Southland Royalty "A" #2-B	9-21-37	11/13/56	57	104,500
" #4-X 4-21-37	11/21/56	69	53,100	
State C Tr. 12 #6-X-C16-21-37	11/14/56	70	45,000	
State C Tr. 13 #8-D	36-21-37	11/15/56	67	39,100
Eva Owen "B" #2-L	34-21-37	11/12/56	65	81,600
W. H. Turner #3-P	29-21-37	11/20/56	66	57,000
SUNRAY MID-CONTINENT OIL COMPANY				
Elliott "A" #2-H	1-22-37	1/8/57	48	33,400
Linam "V" #3-A	29-21-37	1/8/57	63	180,000
W. Lynch #4-L	1-22-37	1/8/57	72	56,500
State Land 15 #4-P	16-21-37	1/8/57	43	66,500
THE TEXAS COMPANY				
A. H. Blinebry NCT-1 #1-0 19-22-38	11/15/56	57.8	22,000	
A. H. Blinebry NCT-1 #7-G19-22-38	11/19/56	57.9	76,000	
TIDEWATER OIL COMPANY				
S. J. Sarkeys #4-F	26-21-37	12/10/56	68.2	74,198
Williamson #2-E	23-21-37	12/6/56	68.5	79,143
State "S" #2-C	15-21-37	12/6/56	53.8	28,838
WESTERN OIL FIELDS, INC.				
Drinkard #2-L	30-22-38	11/27/56	68.1	52,100
Gulf State #1-A	36-22-37	11/27/56	65.2	75,689
Drinkard #5-G	25-22-37	12/2/56	69	138,000

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

New Mexico
OIL CONSERVATION COMMISSION

LAND COMMISSIONER MURRAY E. MORGAN
MEMBER

STATE GEOLOGIST A.L. PORTER JR.
SECRETARY DIRECTOR



P. O. BOX 2045
HOBBS, NEW MEXICO

February 26, 1957

Mr. A. L. Porter, Jr., Director
Oil Conservation Commission
Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

The Tubb Gas Pool Committee had their second meeting at 1:00 P.M. the 25th. At this time the various sub-committees presented their work and discussion of the material took about two hours.

John Runyon made a structure map and four cross-sections, all on short notice. It required considerable night work to finish, however the work was well done.

Considerable discussion was on the definition of an oil well. The committee will probably recommend that an oil well be defined as a well with less than 45 degree gravity and a ratio less than 20,000 : 1 with the limiting ratio being 3,000 : 1. Ernest Fischer worked on this committee and furnished the enclosed test data.

The Commission staff was very active in the committee work, however no attempt was made to make any recommendations to the Committee other than when requested.

Mr. Chuck Bumpass did an excellent job as chairman, and I attribute the extra effort that was shown to his being chairman.

Yours very truly,

OIL CONSERVATION COMMISSION

R. F. Montgomery
R. F. Montgomery
Proration Manager

RFM/mc
encl.

February 14, 1957

MEMORANDUM

TO: Tubb Gas Pool Operators

SUBJECT: Request for Pertinent Data on Tubb Oil Wells in Tubb Gas Pool

You will recall Mr. Porter's memorandum of January 28, 1957 concerning the appointment of an Industry Committee for a study and recommendations concerning rules for oil wells recently completed in the Tubb Gas Pool. Mr. Porter's memorandum is quoted as follows:

"Due to the recent completion of several oil wells in the Tubb formation within the horizontal limits of the Tubb Gas Pool, the Commission feels that consideration should be given to the matter of the adoption of rules governing the operation of such wells. In order that the Commission may have the most complete information available for use in the formulation of such rules, the following operators of wells in the Tubb Pool have been appointed to an Industry Committee with instructions to prepare and make recommendations to the Commission at a hearing to be held on March 14, 1957.

Amerada Petroleum Corporation
Continental Oil Company
Humble Oil & Refining Company
Ohio Oil Company
Shell Oil Company
N. G. Penrose, Incorporated
Gulf Oil Corporation
Samedan Oil Corporation

Commission Staff Members appointed to work with the Committee are Mr. Montgomery, Mr. Fischer, and Mr. Runyon.

The first meeting of the Committee will be held at 9:00 A.M., February 5, 1957, at the Commission Office, 1000 West Broadway, in Hobbs.

Representatives of all Tubb Pool Operators are welcome to attend the Committee meetings or to submit suggestions to the Commission Office at Hobbs."

This is to advise that the meeting was held February 5, 1957, and Gulf Oil Corporation was appointed Chairman of the Committee by the Commission.

It was the consensus of the committee members and of the other operators present that the Tubb Gas Pool is a gas pool and that these few occurrences of oil wells are unusual and have very little significance in relation to the Tubb Gas Pool. Several exhibits are planned for presentation before the Commission at the March Hearing in support of the Committee's consensus that the Tubb oil wells are of minor significance in the Tubb Gas Pool. These exhibits will be a contour map, cross-sections, pertinent data on the Tubb oil wells and the findings and recommendations of the Committee. There are several wells on which the pertinent data as outlined on the attached form are requested. These wells have been selected from the Commission's records and consist of the unquestionable oil wells in the Tubb Gas Pool and those gas wells which, based on the November, 1956, gas-liquid survey of the Tubb gas wells, appear to be border-line cases as either oil or gas wells.

Tubb Gas Pool Operators

-2-

2-14-57

It is planned to call another meeting of the committee members (and all interested operators are invited) on February 21, 1957, for the purpose of reviewing the exhibits and drafting the conclusions and recommendations for presentation of this matter to the Commission. It is, therefore, requested that the information requested on the following wells be submitted as early as possible to insure their receipt prior to the February 21st meeting. Send pertinent data sheets to C. M. Bumpass, Box 2167, Hobbs, New Mexico:

<u>Operator</u>	<u>Lease & Well No.</u>	<u>Location</u>
Amerada Petroleum Corporation	E. Wood No. 7	A - 22-22-37
Cities Service Oil Co.	Brunson "B" No. 3	M - 3-22-37
Continental Oil Co.	Hawk B-3 No. 1	T - 3-21-37
" " "	Holm No. 2	N - 11-21-37
Humble Oil & Refining Co.	N.M. State "V" No. 7	N - 10-21-37
R. Olsen	Sarkeys No. 1	E - 26-21-37
Sinclair Oil & Gas Co.	A. Rogers No. 2	A - 12-22-37

C. M. Bumpass
Chairman Industry Committee -
Tubb Gas Pool

CMB:cm

cc:

Amerada Petroleum Corporation
Drawer "D"
Monument, New Mexico

Humble Oil & Refining Co.
Box 2167
Hobbs, New Mexico

Cities Service Oil Co.
Box 97
Hobbs, New Mexico

R. Olsen
Drawer "Z"
Jal, New Mexico

Continental Oil Co.
Box 68
Eunice, New Mexico

Sinclair Oil & Gas Co.
310 East Broadway
Hobbs, New Mexico

GAS LIQUID RATIO TESTS IN THE TUBB GAS POOL-OCTOBER 1956 TESTS

OPERATOR					
Lease Name Well No.	S-T-R	Date of Test	Condensate Gravity-°	Gas Cond. Ratio	
AMERADA PET. CORP.					
Baker #3-I	10-22-37	11/24/56	65	51,675	
Corrigan #4-A	4-22-37	11/24/56	62	35,546	
Hare #7-M	33-21-37	11/22/56	67	78,252	
State D"A" #3-J	16-21-37	11/24/56	60	75,708	
E. Wood #7-A	22-22-37	11/24/56	49	<u>16,423</u>	
CITIES SERVICE OIL CO.					
Brunson "B" #3-M	3-22-37	11/15/56	---(si-no pc)	9,070	
Brunson "C" #6-I	3-22-37	11/15/56	62.7	<u>86,000</u>	
Owen #3-J	35-21-37	11/15/56	62.3	41,509	
State S #2-F	15-21-37	11/16/56	64.0	18,913	
CONE, J. R.					
Anderson #1-I	21-21-37	1/26/57	71.5	167,040	
CONTINENTAL OIL CO.					
Hawk B-3 #1-T	3-21-37	1/17/57	<u>37</u>	<u>1.236 (Oil Well)</u>	
Hawk B-9 #3-C	9-21-37	1/12/57	53	<u>63,727</u>	
Hawk B-9 #5-K	9-21-37	1/15/57	---	---	
Hawk B-9 #7-P	9-21-37	1/2/57	55	12,388	
Lockhart A-27 #1-DT	27-21-37	1/11/57	63	66,388	
Lockhart A-27 #1-G	27-21-37	1/12/57	63	102,285	
Lockhart A-35 #3-C	35-21-37	1/13/57	56	37,800	
Lockhart B-35 #1-G	35-21-37	1/12/57	<u>56</u>	24,500	
Nolan #2-N	11-21-37	1/9/57	<u>44</u>	26,200	
State 10 #3-D	10-21-37	1/12/57	<u>54</u>	614,000	
Wantz D-21 #3-J	21-21-37	1/21/57	54	61,000	
Wantz D-21 #4-K	21-21-37	1/12/57	54	42,200	
COSDEN PET. CORP.					
E. Butler #3-N	18-22-38	12/4/56 (csg.-tbg.)	66.3	59,523	
		12/8/56	66.3	62,791	
GREENBRIER OIL CO.					
Sarkeys #1-B	26-21-37	12/14/56	77.2	61,304	
GULF OIL CORP.					
Amanda #1-J	25-22-37	11/21/56	69	97,640	
Andrews #2-G	32-22-38	11/22/56	71.8	42,770	
Carson "C" #3-P	28-21-37	11/26/56	73.4	29,929	
Danglade #1-M	13-22-37	11/22/56	71.3	44,952	
Eaves #5-H	10-22-37	11/26/56	68.9	31,813	
Eubank #1-B	22-21-37	11/22/56	67.6	49,307	
Gutman #1-N	19-22-38	12/10/56	65.5	104,350	
Gutman #2-C	19-22-38	11/20/56	68.1	29,336	
Hugh #4-O	14-22-37	12/3/56	67.9	41,247	
Hugh #7-C	14-22-37	11/26/56	60.5	46,283	
E. King #13-A	28-21-37	No connection			
E. King #22-C	28-21-37	11/23/56	70	44,283	
Leonard "E" #4-A	16-21-37	11/22/56	66.8	62,068	
Mark #5-A	3-22-37	11/26/56	72.8	19,091	
M. Owen #5-A	34-21-37	11/26/56	68.4	40,024	
McCormack #7-I	32-21-37	11/21/56	70.6	31,844	
Paddock #3-P	1-22-37	12/4/56	52.6	21,412	
Vivian #1-C	20-22-38	11/20/56	61.9	41,896	
Watkins #1-O	29-22-38	11/20/56	61.9	52,617	
HUMBLE OIL & REFINING CO.					
Blinebry Tubb Gas Unit #1-O					
	10-21-37	12/8/56	56.4	51,057	
Hardison B #1-H	34-21-37	10/15/56	61.6	48,843	
Hardison B #7-P	27-21-37	11/5/56	69.1	61,771	
Penrose #2-H	13-22-37	12/10/56	70	46,483	
N. M. State S #12-A	2-22-37	12/12/56	45.2	45,601	
N. M. State S #13-B	2-22-37	11/3/56	68.6	48,347	
N. M. State S #20-E	2-22-37	12/8/56	66.5	63,869	
N. M. State S #21-L	2-22-37	12/6/56	67.9	50,961	
N. M. State S #23-P	2-22-37	11/8/56	68.5	37,019	
N. M. State V #7-N	10-21-37	12/6/56	<u>36.4</u>	<u>2,563 (Oil)</u>	

OPERATOR	Lease Name Well No.	S-T-R	Date of Test	Condensate Gravity-O	Gas Cond. Ratio
N. B. HUNT	Weatherly E-1-G	21-21-37	11/21/56	67	74,000
MAGNOLIA PET. CO.	Brunson Argo #6-E	10-22-37	1/14/57	63.8	30,350
	Carson #3-F	33-21-37	1/14/57	67.8	47,000
	Carson #19-L	26-21-37	1/14/57	70.0	57,200
	Corrigan #7 P	33-21-37	1/14/57	64.0	125,500
	Williamson #1-A	23-21-37	1/14/57	61	33,000
	Long #8-J	11-22-37	1/14/57	66	-----
MARKHAM, CONE AND REDFERN	Eubanks #2-L	14-21-37	12/9/56	72	124,542
MORAN OIL PRODUCING & DRUG. CORP.	Owen #1-E	14/21/37	12/14/56	54.2	42,633
			12/5/56	59.8	42,633
OHIO OIL COMPANY	Lynch #4-D	1-22-37	11/29/56	66.4	39,664
	Marshall "B" #2-M	27-21-37	12/6/56	70.5	84,579
	J. L. Muncy #1-P	24-22-37	11/29/56	66.8	83,978
	M. Owen #3-N	35-21-37	11/29/56	70.8	51,379
	L. G. Warlick "C" #1-J	15-21-37	12/7/56	68.3	67,489
	Worthan #9-E	11-22-37	11/29/56	68.1	34,366
	Worthan #11-F	11-22-37	12/7/56	72.4	36,260
R. OLSEN	Sarkeys #1-E comp. 1/8/57	26-21-37	3/12/57	<u>44.2</u>	<u>2500 (oil)</u>
R. OLSEN OIL COMPANY	Boyd #5-B	23-22-37	10/26/56	60.9	51,260 (?)
	Cone #1-J	26-21-37	11/15/56	65	79,960 ✓
	Owens #1-M	25-21-37	11/15/56	56	33,700
PENROSE, NEVILLE G.	Hinton #3T-N	12-22-37	12/19/56	67.8	58,490
	Hinton #5-P	12-22-37	12/5/56	67.1	64,284
	Elliott Hinton #1-E	12-22-37			No p c
ROWAN OIL COMPANY	Walden #3-T C	15-22-37	12/12/56	----tstm	150,000
SAMEDAN OIL CORP.	Parks "A" #4-O	14-22-37	12/2/56	58	39,585
	Parks #6-P	14-22-37	12/2/56	56	40,745
SHELL OIL COMPANY	Argo #1-M	15-21-37	1/11/57	63.8	108,382
	Argo A #1-D	22-21-37	1/9/57	69.6	315,393
	Long #5-N	11-22-37	1/11/57	60.4	61,709
	Sarkeys #1-M	23-21-37	1/9/57	68.2	114,505
	State 15 #1-C	15-21-37	1/9/57	56.5	30,484
	Turner #2-L	22-21-37	1/9/57	72	62,075
	Turner #3-J	22-21-37	1/11/57	68.7	53,774
SINCLAIR OIL & GAS CO.	Alexander Rogers #2-A	12-22-37	11/8/56	<u>43.9</u>	<u>1892 (Oil Well)</u>
	State 367 #3-N	36-21-37	11/8/56	<u>53.1</u>	<u>19,924</u>
	Sarkeys #2-O	23-21-37	11/9/56	70	81,950
SKELLY OIL COMPANY	Baker B #15-J	10-22-37	12/12/56	72	71,489

OPERATOR					
Lease Name Well No.	S-T-R	Date of Test	Condensate Gravity ⁵	Gas Cond. Ratio	
STANOLIND (PAN AMERICAN PET. CORP.)					
Southland Royalty "A" #2-B		9-21-37			
"	9-21-37	11/13/56	57	104,500	
" #4-X	4-21-37	11/21/56	69	53,100	
Stat# 0" Tr. 12 #6-X-C16-21-37		11/14/56	70	45,000	
State 0 Tr. 13 #8-D	36-21-37	11/15/56	67	39,100	
Eve Owen "B" #2-L	34-21-37	11/12/56	65	82,600	
W. E. Turner #3-P	29-21-37	11/26/56	66	57,000	
SUNRAY MID-CONTINENT OIL COMPANY					
Elliott "A" #2-H	1-22-37	1/8/57	48	33,400	
Linam "V" #3-A	29-21-37	1/8/57	63	180,000	
W. Lynch #4-L	1-22-37	1/8/57	72	56,500	
State Land 15 #4-P	16-21-37	1/8/57	<u>43</u>	66,600	
THE TEXAS COMPANY					
A. H. Blinebry NCT-1 #1-0 19-22-38		11/15/56	57.8	22,000	
A. H. Blinebry NCT-1 #7-G19-22-38		11/19/56	57.9	76,000	
TIDEWATER OIL COMPANY					
S. J. Sarkeys #4-F	26-21-37	12/10/56	68.2	74,198	
Williamson #2-E	23-21-37	12/6/56	68.5	79,143	
State "S" #2-C	15-21-37	12/6/56	53.8	23,838	
WESTERN OIL FIELDS, INC.					
Drinkard #2-L	30-22-38	11/27/56	68.1	52,100	
Gulf State #1-A	36-22-37	11/27/56	65.2	75,689	
Drinkard #5-G	25-22-37	12/2/56	69	138,000	

6567.9

779,77.5
1566567.9 - 6567.9 are all wells.
1046567.9 - 6567.9 are all wells.
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