

Before the
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 10796 Exhibit No. 13
Submitted By: MARATHON OIL COMPANY
Hearing Date: OCTOBER 14, 1995

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date			
Company TXO PRODUCTION CO.				Connection TO AIR			
Pool OSUDO WEST				Location WOLFCAMP			
Completion Date 6-24-85		Total Depth 12,884		Plug Back TD 11950			
Csg. Size 5 1/2"		Set At 12884		Perforations: From 11440 To 11445			
Tbg. Size 2 7/8"		Set At 11289		Perforations: From OPEN ENDED			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Pecker Set At 11289			
Producing Thru Tubing		Reservoir Temp. °F 187° @ 11442'		Mean Annual Temp. °F 60°			
Baro. Press. - P _a 13.2		State N.M.					
L 1:1442		H 11442		G _g .7582			
% CO ₂ 1.507		% N ₂ .797		% H ₂ S Prover			
Meter Run 4.026		Taps Flange					
FLOW DATA							
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w		
1	4.026	x	2.000	41	4		
2	4.026	x	2.000	41	6 1/2		
3	4.026	x	2.000	40	25		
4	4.026	x	2.000	42	41		
5							
TUBING DATA							
	Press. p.s.i.g.	Temp. °F					
1	2380	75°					
2	2310	75					
3	2090	75					
4	1950	75					
5							
CASING DATA							
	Press. p.s.i.g.	Temp. °F					
1	PKR	CHOKE					
2							
3							
4							
5							
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor F _{pv}	Rate of Flow Q, Mcfd
1	19.81	14.72	54.2	.9905	1.149	NIL	331.8
2	19.81	18.41	54.2	.9905	1.149	NIL	415.1
3	19.81	36.47	54.2	.9905	1.149	NIL	822.2
4	19.81	47.57	54.2	.9905	1.149	NIL	1072.5
5							
NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 6.875 Mcf/bbl.		
1	.08	530	1.31	NIL	A.P.I. Gravity of Liquid Hydrocarbons 53.7 @ 60° Deg.		
2	.08	530	1.31	NIL	Specific Gravity Separator Gas .7582 X X X X X X X X		
3	.08	530	1.31	NIL	Specific Gravity Flowing Fluid X X X X X		
4	.08	530	1.31	NIL	Critical Pressure 674 P.S.I.A. P.S.I.A.		
5					Critical Temperature 405 R R		
P _c 4698 P _c ² 22071.2					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{22071.2}{P_c^2 - P_w^2}$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 9418.9$
NO.	P _t ²	P _w	R _w ²	P _c ² - R _w ²	ACF = Q $\left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 2513.8$		
1		4483	20097.3	1973.9			
2		4350	18922.5	3148.7			
3		3997	15976	6095.2			
4		3357	12652.3	9418.9			
5							
Absolute Open Flow 2514 Mcfd @ 15.025				Angle of Slope @ 45°		Slope, n 1.000	
Remarks: calculated from known Bottom Hole Pressures taken with a Kuster Gauge							
Well made 16 Bbls. of condensate during test.							
Approved By Commission:		Conducted By: R.W.		Calculated By: J.D.		Checked By: J.D.	

TXO PRODUCTION CO.

JORDAN "B" NO. 2

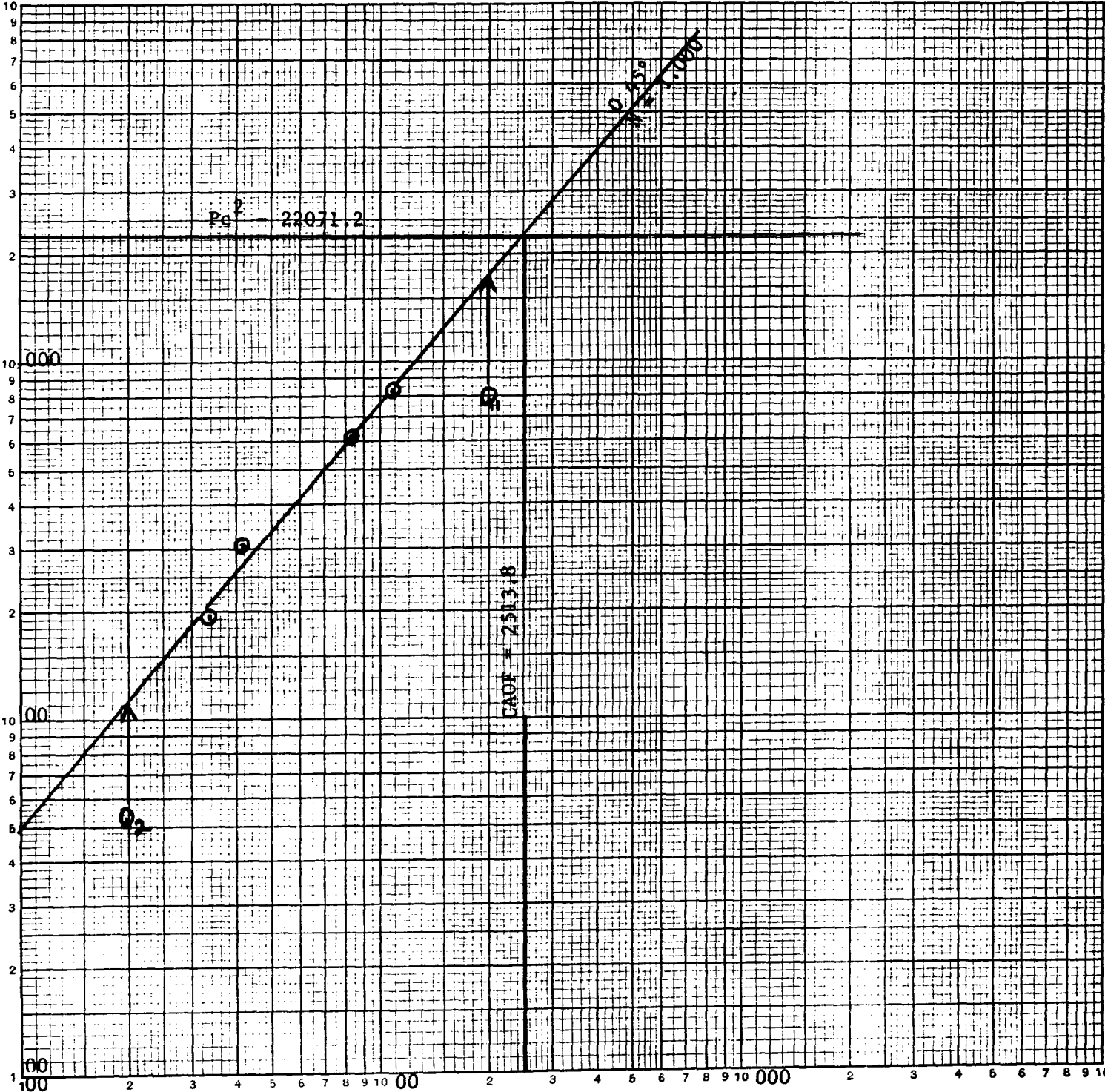
JULY 8, 1985

Q1 = 2000 = Log - 3.3010300
Q2 = 200 = Log - 2.3010300
1.000000

CAOF = 1072.5 (22071.2) 1.000
9418.9 = 2513.8

LOGARITHMIC 46 7400
3 X 3 CYCLES
KEUFFEL & ESSER CO.

Pc2-Pw2 in thousands



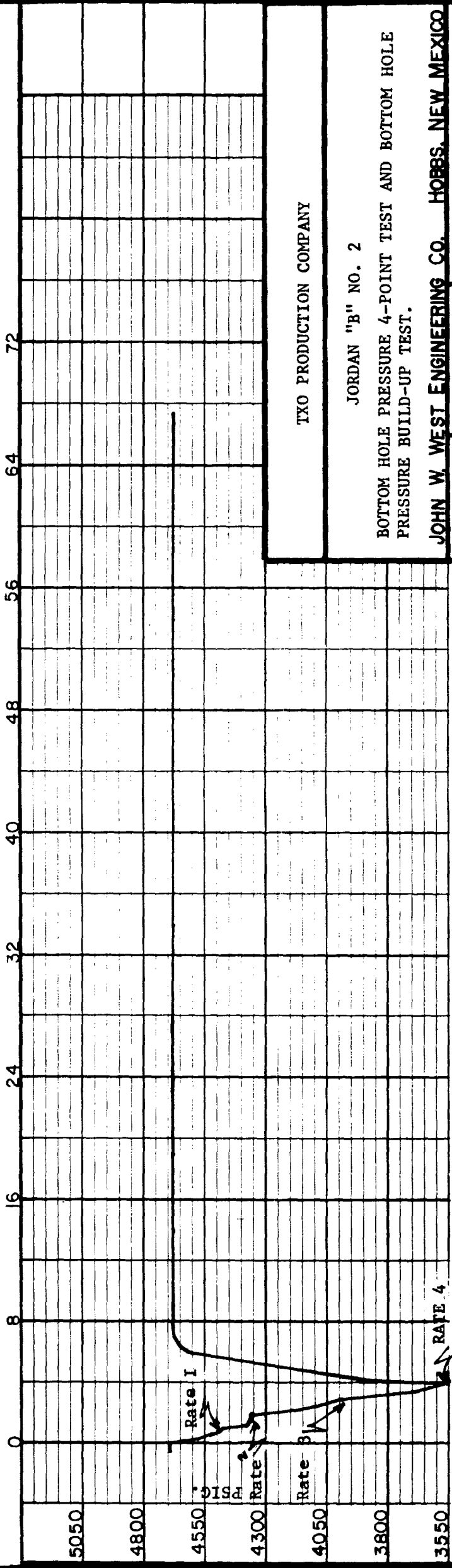
Q = Mcf/Day

TEST DATE: JULY 8 to 11, 1985
TEST DEPTH: 11442 FEET

ELEMENT NO: 34911
RANGE: 0-6000 PSI
CLOCK NO: 20439
RANGE: 0-72 Hours

NOTE: See tabulation of times and pressures on attached sheet.

TIME IN HOURS



TXO PRODUCTION COMPANY

JORDAN "B" NO. 2

BOTTOM HOLE PRESSURE 4-POINT TEST AND BOTTOM HOLE
PRESSURE BUILD-UP TEST.

JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 7-12-85 Drawn by: bsm Scale: as shown

TXO PRODUCTION COMPANY
JORDAN "B" NO. 2
BOTTOM HOLE PRESSURE 4-POINT TEST AND
BOTTOM HOLE PRESSURE BUILD-UP TEST.
TABULATION OF TIMES AND PRESSURES.

TEST CONDUCTED BY:
JOHN WEST ENGINEERING CO.

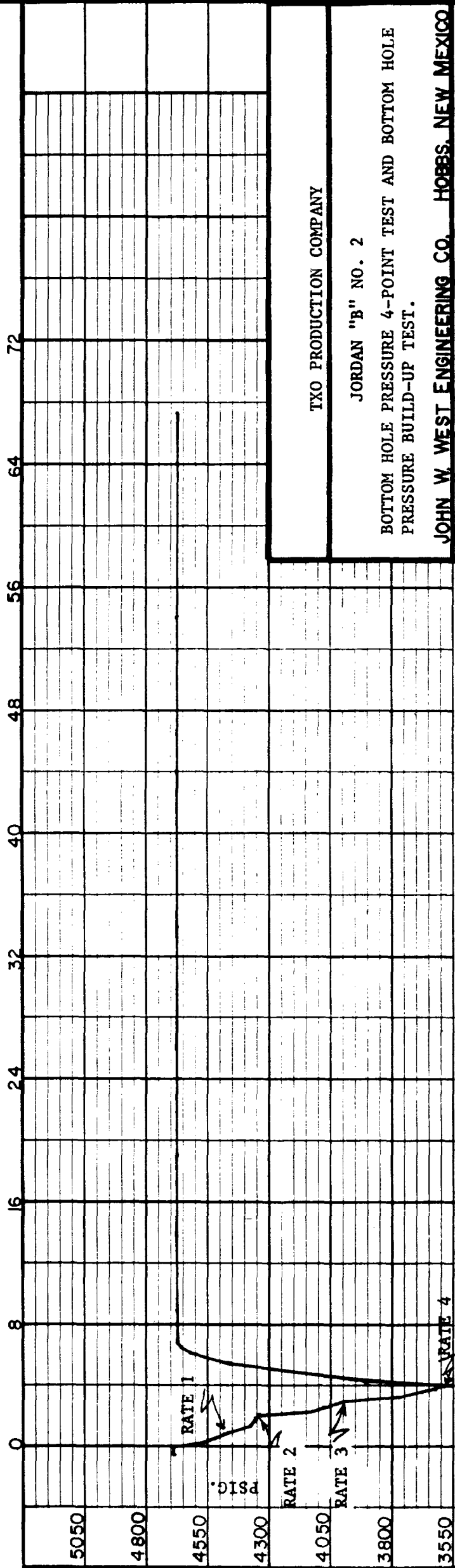
TEST DATE: JULY 8-11, 1985
TEST DEPTH: 11,442 FEET
ELEMENT NO: 34911 (0-6000 psi)

DATE	TIME	CUM HRS./MIN.		PSIG @ 11,442 FEET
7-8-85	2:00 P.M.			4698 gauge reached 11,442'
	2:30 P.M.	00 Hrs.	00 Min.	4698 Begin 4-Point Test.
	2:45 P.M.	00	15	4571
	3:00 P.M.	00	30	4526
	3:15 P.M.	00	45	4495
	3:30 P.M.	01	00	4483 End Rate I
	3:45 P.M.	01	15	4381
	4:00 P.M.	01	30	4369
	4:15 P.M.	01	45	4359
	4:30 P.M.	02	00	4350 End Rate II
	4:45 P.M.	02	15	4133
	5:00 P.M.	02	30	4079
	5:15 P.M.	02	45	4045
	5:30 P.M.	03	00	3997 End Rate III
	5:45 P.M.	03	15	3786
	6:00 P.M.	03	30	3681
	6:15 P.M.	03	45	3633
	6:30 P.M.	04	00	3557 End Rate IV
7-8-85	6:30 P.M.	00 Hrs.	00 Min.	3557 Shut-In, Begin Build-Up
	6:45 P.M.	00	15	3913
	7:00 P.M.	00	30	3982
	7:15 P.M.	00	45	4021
	7:30 P.M.	01	00	4287
	8:00 P.M.	01	30	4462
	8:30 P.M.	02	00	4631
	9:00 P.M.	02	30	4659
	9:30 P.M.	03	00	4671
	10:30 P.M.	04	00	4677
7-8-85	11:30 P.M.	05	00	4677
7-9-85	4:30 A.M.	10	00	4680
	9:30 A.M.	15	00	4683
7-9-85	2:30 P.M.	20	00	4683
7-10-85	12:30 A.M.	30	00	4683
	10:30 A.M.	40	00	4683
7-10-85	8:30 P.M.	50	00	4683
7-11-85	6:30 A.M.	60	00	4683
7-11-85	10:00 A.M.	63	30	4683 Gauge off bottom, end of tes

TEST DATE: JULY 8 to 11, 1985
TEST DEPTH: 11,442 FEET
ELEMENT NO: 53217
RANGE: 0-7100 PSI
CLOCK NO: E-794
RANGE: 0-72 Hours

NOTE: See tabulation of times and pressures on attached sheet.

TIME IN HOURS



TXO PRODUCTION COMPANY
JORDAN "B" NO. 2
BOTTOM HOLE PRESSURE 4-POINT TEST AND BOTTOM HOLE
PRESSURE BUILD-UP TEST.
JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO
Date: 7-12-85 Drawn by: bsm Scale: as shown

TXO PRODUCTION COMAPNY
JORDAN "B" NO. 2
BOTTOM HOLE PRESSURE 4-POINT TEST AND
BOTTOM HOLE PRESSURE BUILD-UP TEST.
TABULATION OF TIMES AND PRESSURES.

TEST CONDUCTED BY:
JOHN WEST ENGINEERING COMPANY

TEST DATE: JULY 8 to 11, 1985
TEST DEPTH: 11,442 FEET
ELEMENT NO: 53217 (0-7100 PSI)
OPERATOR: R.W.

DATE	TIME	CUM HRS./MIN.		PSIG @ 11,442 FEET
7-8-85	2:00 P.M.			4691 gauge reached 11,442 Feet
	2:30 P.M.	00 Hrs.	00 Min.	4691 Shut-In, Begin Build-Up
	2:45 P.M.	00	15	4566
	3:00 P.M.	00	30	4520
	3:15 P.M.	00	45	4491
	3:30 P.M.	01	00	4477 End Rate I
	3:45 P.M.	01	15	4376
	4:00 P.M.	01	30	4365
	4:15 P.M.	01	45	4354
	4:30 P.M.	02	00	4344 End Rate II
	4:45 P.M.	02	15	4129
	5:00 P.M.	02	30	4075
	5:15 P.M.	02	45	4039
	5:30 P.M.	03	00	3991 End Rate III
	5:45 P.M.	03	15	3780
	6:00 P.M.	03	30	3676
	6:15 P.M.	03	45	3626
	6:30 P.M.	04	00	3551 End Rate IV
	6:30 P.M.	00 Hrs.	00 Min.	3551 Shut-In, Begin Build-Up
	6:45 P.M.	00	15	3909
	7:00 P.M.	00	30	3976
	7:15 P.M.	00	45	4014
	7:30 P.M.	01	00	4283
	8:00 P.M.	01	30	4455
	8:30 P.M.	02	00	4627
	9:00 P.M.	02	30	4656
	9:30 P.M.	03	00	4666
	10:30 P.M.	04	00	4666
7-8-85	11:30 P.M.	05	00	4666
7-9-85	4:30 A.M.	10	00	4674
	9:30 A.M.	15	00	4677
7-9-85	2:30 P.M.	20	00	4677
7-10-85	12:30 A.M.	30	00	4677
	10:30 A.M.	40	00	4677
7-10-85	8:30 P.M.	50	00	4677
7-11-85	6:30 A.M.	60	00	4677
7-11-85	10:00 A.M.	63	30	4677 Gauge off bottom, end of test



PHONE 505/393-3561

P. O. BOX 1161

611 W. SNYDER

HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT: JOHN WEST ENGINEERING
ADDRESS: 412 N DAL PASO
CITY, STATE: HOBBS NM 88240

ANALYSIS NUMBER: 7527
DATE OF RUN: 7 9 85
DATE SECURED: 7 8 85

SAMPLE IDENT: TXO PRODUCING COMPANY - JORDAN B-42
SAMPLING PRESS: SAMPLING TEMP: 70 DEG F

REMARKS: TRAP PRESSURE 42 #

***** GAS ANALYSIS *****

	MOLE PERCENT	GAL/ MCF
NITROGEN	0.797	
CARBON DIOXIDE	1.507	
METHANE	74.728	
ETHANE	12.805	3.415
PROPANE	6.312	1.733
ISO-BUTANE	0.912	0.298
NORMAL BUTANE	1.839	0.578
ISO-PENTANE	0.384	0.141
NORMAL PENTANE	0.388	0.140
HEXANES	0.328	0.135
TOTAL	100.000	6.440

PROPANE GPM:	1.73	BUTANES GPM:	0.88
ETHANE GPM:	3.41	PENTANES PLUS GPM:	0.42

SPECIFIC GRAV (CALC): 0.7582
MOLE WEIGHT: 21.96

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
	14.696	1254	1277
	14.650	1251	1273
	14.730	1257	1280
	14.735	1258	1280

DEANE SIMPSON