Submit in duplicate to appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
ergy, Minerals and Natural Resources Depart t

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator: Texaco Exploration & Production, Inc.						Lease or Unit Name: B.F. Harrison B			
Type Test: [X] Initial [ ] Annual [ ] Special						Test Date: 10-21-91		Well No.: 5	
Completion Date: 10-15-91		Total Depth: 10307		Plug Back TD: 7415		Elevation: GR-3316		Unit Ltr. - Sec. - TWP - Rge.: E - 9 - 23S - 37E	
Csg. Size: 5½	Wt.: 17	d:	Set At: 10307	Perforations: From: 5605	To: 5812			County: Lea	
Tbg. Size: 2 7/8	Wt.: 6.5	d: 2.441	Set At: 5519	Perforations: From:	To:			Pool: UNDESIGNATED	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple: Single				Packer Set At: 5519				Formation: BLINEBRY	
Producing Thru: tubing	Reservoir Temp. °F: 129@ 5600	Mean Annual Temp. °F: 60		Baro. Press - P_a: 13.2				Connection: vented	
L: 5519	H: 5519	Gg: .679	% CO_2: 1.74	% N_2: 2.02	% H_2S:	Prover:		Meter Run: 3.067	Taps: flange

	FLOW DATA				TUBING DATA		CASING DATA		
NO.	Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					2011		PKR		72 hrs.
1.	3 X 1.500	421	4.00	74	1960		PKR		1 hr.
2.	3 X 1.500	437	12.25	58	1927		PKR		1 hr.
3.	3 X 1.500	844	43.50	55	1626		PKR		1 hr.
4.	3 X 1.500	936	98.00	59	1609		PKR		1 hr.
5.									

RATE OF FLOW CALCULATIONS

NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg.	Super Compress. Factor, F pv.	Rate of Flow Q, Mcfd
1.	11.13	41.67	434.2	.9868	1.214	1.044	580
2.	11.13	74.26	450.2	1.002	1.214	1.053	1,059
3.	11.13	193.10	857.2	1.005	1.214	1.104	2,895
4.	11.13	304.99	949.2	1.001	1.214	1.117	4,608
5.							

NO.	P_r	Temp. °R	T_r	Z
1.	.64	534	1.42	.918
2.	.67	518	1.38	.902
3.	1.27	515	1.37	.821
4.	1.41	519	1.38	.802
5.				

Gas Liquid Hydrocarbon Ratio: N/A Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: N/A Deg.
Specific Gravity Separator Gas: .679 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: *670 P.S.I.A. P.S.I.A.
Critical Temperature: *375 R R

P_c 2024.2 P_c^2 4097.4

NO.	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1.		1973.7	3895.5	201.9
2.		1942.0	3771.4	326.0
3.		1654.5	2737.4	1360.0
4.		1661.1	2759.3	1338.1
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.062$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.062$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 14.110$

Absolute Open Flow: 14,110 Mcfd @ 15.025 | Angle of Slope θ: 45 | Slope, n: 1.000

Remarks: *= corrected to 1.74% CO_2 & 2.02% N_2

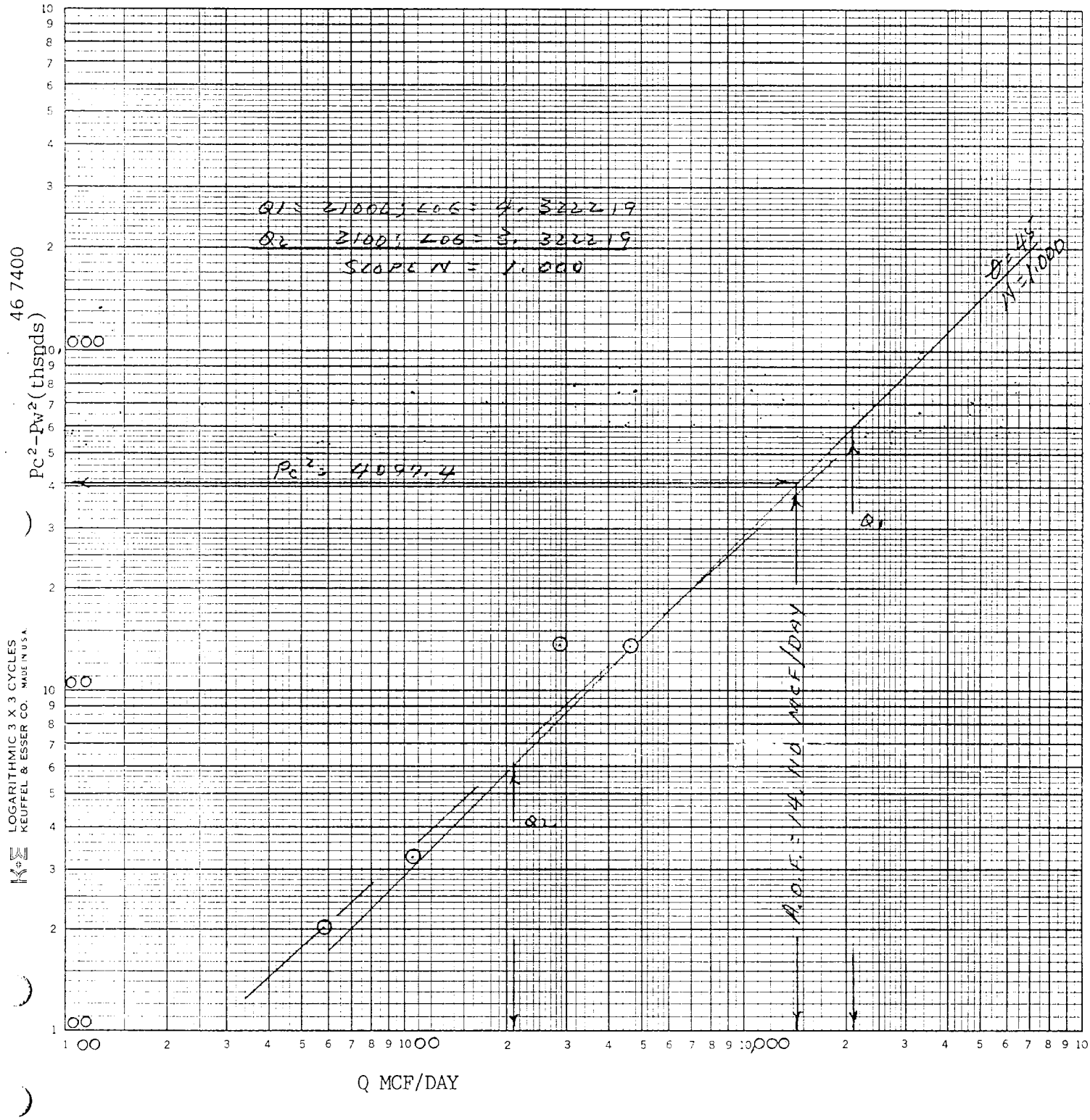
WELL MADE 6.50 BBLS H_2O DURING TEST

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Pro Well Testers	BM	BM

Texaco Exploration & Production Inc.
B.F. Harrison B, Well #5

Lea County, New Mexico

10-21-91



Laboratory Services
1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline
Attention: Mr. Ray Gallagher
P. O. Box 791
Hobbs, New Mexico 88240

SAMPLE IDENTIFICATION: B.F. Harrison B #5
COMPANY: TEPI
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 10-21-91 11:30 AGAS (XX) LIQUID ( )
ANALYSIS DATE: 10-21-91 SAMPLED BY: Ray Gallagher
PRESSURE - PSIG 680.00 ANALYSIS BY: Vickie Walker
SAMPLE TEMP. °F 60.00
ATMOS. TEMP. °F 75.00

REMARKS:

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM
Oxygen	(O2)		
Hydrogen Sulfide	(H2S)		
Nitrogen	(N2)	2.02	
Carbon Dioxide	(CO2)	1.74	
Methane	(C1)	83.49	
Ethane	(C2)	7.98	2.130
Propane	(C3)	2.97	0.817
I-Butane	(IC4)	0.33	0.108
N-Butane	(NC4)	0.66	0.208
I-Pentane	(IC5)	0.14	0.051
N-Pentane	(NC5)	0.15	0.055
Hexane	(C6)	0.52	0.212
Heptanes Plus	(C7+)	0.00	0.000
		100.00	3.581

BTU/CU.FT. - DRY	1128	MOLECULAR WT	19.6537
AT 14.650 DRY	1124		
AT 14.650 WET	1105	26# GASOLINE -	0.387
AT 15.025 DRY	1153		
AT 15.025 WET	1133		
SPECIFIC GRAVITY -			
CALCULATED	0.679		
MEASURED	0.000		

TEXACO INC.
P.O. Box 3109
Midland, Texas 79702

FIELD DATA SHEET

COMPANY REPRESENTATIVE Randy TEAMMEL

LEASE NAME & NO. B.F. HARRISON B #5 TEST DATE & TIME 8:15 AM 10/21/91

COUNTY Lea STATE N.M. FORMATION Blinebry

TEST TYPE ✓ INITIAL ____ ANNUAL ____ SPECIAL TYPE WELL ____

COMPLETION DATE ____

CONNECTION Flange METER RUN 3.067 ORIFICE 1.500

SHUT IN TUBING PRESSURE 2011 TIME 7:45 AM DATE 10/21/91

SHUT IN TUBING TEMPERATURE 62°F. TIME 7:45 DATE 10/21/91

(PSIA = PSIG + 13.2 PSI)

TIME DATE	ELAP. HR.	TBG. PRES PSIA	CASING PRES PSIA	W/H TEMP	METER OR PROVER PRES PSIA	METER OR PROVER DIFF INCHS	METER OR PROVER TEMP	LINE PRES PSIA	CHOKE SIZE	MCFD	OIL	WTR
8:15		2011	13.2	62								
9:15	01	1960		72	421	4	74		6/64	571	—	—
10:15	02	1927		77	437	12.25	58		9/64	1035	—	—
11:15	03	1626		81	844	43.5	55		14/64	2712	—	3.9
12:15	04	1609		82	936	98	59		22/64	4203	—	2.6

REMARKS: 62 ppm H2S Csg Size & Depth & wt 5½" @ 10,307' 17#

PBTD - 7415' Tbg. Size Depth & wt. 2⅞" @ 6.50#

TD - 10307' Packer @ 5519.

Blinebry Perfs - 5605' to 5812'

VOLUME 1: 580 PSIA 1: 1973.2
2: 1059 2: 1940.2

FORM C-122E WORKSHEET FOR STEPWISE CALCULATION (SUBSURFACE) PRESSURE (Pf & Ps)

COMPANY :TEXACO EXP & PROD LEASE :HARR B WELL NO. : 5 DATE : 10 21 91

UNIT : SECTION : TOWNSHIP : RANGE :

L : 5519 H : 5519 L/H : 1.0 G/GMIX : 0.679

CO2 : 1.74 N2 : 2.02 H2S : 0

d : 2.441 Fr : 0.010763 Qm : 0.580 (L/H)(FrQm)0.000039

PCR : 670 TCR : 375

LINE	ITEM	SOURCE	1	2	3	4	5	
1	H		0	2760		5519		
2	GH		0	1873.70		3747.40		DELTA P = 349.4
3	37.5GH		0	70264		140528		
								Ps = 2322.6
4	Pc or Pn		1973.2	2151.7	2149.8	2326.2	2326.2	
5	Pr		2.95	3.21	3.21	3.47	3.47	
6	T		534	561.595	561.595	589.19	589.19	
7	Tr		1.42	1.50	1.50	1.57	1.57	
8	Z		0.728	0.772	0.772	0.809	0.809	
9	P/ZP/Z	4/8	2709.1	2788.1	2785.5	2873.7	2873.7	
10	P/TZ	9/6	5.0733	4.9646	4.9600	4.8773	4.8773	
11	Ln10^2/1000	(10)2/100	0.02574	0.02465	0.02460	0.02379	0.02379	
12	L/H(FrQm)2		0.000039	0.000039	0.000039	0.000039	0.000039	
13		11+12	0.025777	0.024686	0.024640	0.023827	0.023827	
14	In	10/13	196.812	201.107	201.295	204.696	204.696	
15	m=Pn-Pn-1			179	177	176	173	
16	N=In+In-1			397.920	398.107	405.991	405.991	
17	M x N	15x16			70297		70231	
18	SUM(MxN)	SUM17			70297		140528	

FORM C-122E WORKSHEET FOR STEPWISE CALCULATION (SUBSURFACE) PRESSURE (Pf & Ps)

COMPANY :TEXACO EXP & PROD LEASE :HARR B WELL NO. : 5 DATE : 10 21 91

UNIT : 0 SECTION : 0 TOWNSHIP : 0 RANGE : 0

L : 5519 H : 5519 L/H : 1.0 G/GMIX : 0.679

CO2 : 1.74 N2 : 2.02 H2S : 0

d : 2.441 Fr :0.010763 Qm : 1.059 (L/H)(FrQm)0.000130

PCR : 670 TCR : 375

LINE	ITEM	SOURCE	1	2	3	4	5	
1	H		0	2760		5519		
2	GH		0	1873.70		3747.40		DELTA P = 344.6
3	37.5GH		0	70264		140528		
								Ps = 2284.8
4	Pc or Pn		1940.2	2116.1	2114.3	2288.2	2288.2	
5	Pr		2.90	3.16	3.16	3.42	3.42	
6	T		534	561.595	561.595	589.19	589.19	
7	Tr		1.42	1.50	1.50	1.57	1.57	
8	Z		0.730	0.772	0.772	0.810	0.810	
9	P/ZP/Z	4/8	2659.4	2739.8	2737.3	2826.3	2826.3	
10	P/TZ	9/6	4.9802	4.8786	4.8742	4.7970	4.7970	
11	Ln10^2/1000	(10)2/100	0.02480	0.02380	0.02376	0.02301	0.02301	
12	L/H(FrQm)Σ		0.000130	0.000130	0.000130	0.000130	0.000130	
13		11+12	0.024932	0.023930	0.023888	0.023141	0.023141	
14	In	10/13	199.749	203.866	204.046	207.293	207.293	
15	M=Pn-Pn-1			176	174	174	171	
16	N=In+In-1			403.615	403.795	411.340	411.340	
17	M x N	15x16			70295		70232	
18	SUM(MxN)	SUM17			70295		140528	

VOLUME 1: 2895 PSIA 1: 1639.2
2: 4608 2: 1622.2

FORM C-122E WORKSHEET FOR STEPWISE CALCULATION (SUBSURFACE) PRESSURE (Pf & Ps)

COMPANY :TEXACO EXP & PROD LEASE :HARR B WELL NO. : 5 DATE : 10 '21 91

UNIT : SECTION : TOWNSHIP : RANGE :

L : 5519 H : 5519 L/H : 1.0 G/GMIX : 0.679

CO2 : 1.74 N2 : 2.02 H2S : 0

d : 2.441 Fr :0.010763 Qm : 2.895 '(L/H)(FrQm)0.000971

PCR : 670 TCR : 375

LINE	ITEM	SOURCE	1	2	3	4	5	
1	H		0	2760		5519		
2	GH		0	1873.70		3747.40		DELTA P = 302.7
3	'37.5GH		0	70264		140528		
								Ps = 1941.9
4	Pc or Pn		1639.2	1791.7	1791.1	1942.9	1942.9	
5	Pr		2.45	2.67	2.67	2.90	2.90	
6	T		534	561.595	561.595	589.19	589.19	
7	Tr		1.42	1.50	1.50	1.57	1.57	
8	Z		0.748	0.784	0.784	0.816	0.816	
9	P/ZP/Z	4/8	2191.3	2284.8	2284.0	2381.3	2381.3	
10	P/TZ	9/6	4.1036	4.0685	4.0670	4.0416	4.0416	
11	Ln10^2/1000	(10)2/100	0.01684	0.01655	0.01654	0.01633	0.01633	
12	L/H(FrQm)2		0.000971	0.000971	0.000971	0.000971	0.000971	
13		11+12	0.017810	0.017523	0.017511	0.017306	0.017306	
14	In	10/13	230.407	232.174	232.249	233.545	233.545	
15	M=Pn-Pn-1			152	152	152	151	
16	N=In+In-1			462.581	462.656	465.794	465.794	
17	M x N	15x16			70275		70252	
18	SUM(MxN)	SUM17			70275		140528	

FORM C-122E WORKSHEET FOR STEPWISE CALCULATION (SUBSURFACE) PRESSURE (Pf & Ps)

COMPANY :TEXACO EXP & PROD LEASE :HARR B WELL NO. : 5 DATE : 10 21 91

UNIT : 0 SECTION : 0 TOWNSHIP : 0 RANGE : 0

L : 5519 H : 5519 L/H : 1.0 G/GMIX : 0.679

CO2 : 1.74 N2 : 2.02 H2S : 0

d : 2.441 Fr :0.010763 Qm : 4.608 (L/H)(FrQm)0.002460

PCR : 670 TCR : 375

LINE	ITEM	SOURCE	1	2	3	4	5	
1	H		0	2760		5519		
2	GH		0	1873.70		3747.40		DELTA P = 327.5
3	'37.5GH		0	70264		140528		
								Ps = 1949.7
4	Pc or Pn		1622.2	1785.9	1785.9	1949.6	1949.6	
5	Pr		2.42	2.67	2.67	2.91	2.91	
6	T		534	561.595	561.595	589.19	589.19	
7	Tr		1.42	1.50	1.50	1.57	1.57	
8	Z		0.750	0.784	0.784	0.816	0.816	
9	P/ZP/Z	4/8	2164.4	2276.6	2276.6	2390.1	2390.1	
10	P/TZ	9/6	4.0531	4.0538	4.0538	4.0566	4.0566	
11	Ln10^2/1000	(10)2/100	0.01643	0.01643	0.01643	0.01646	0.01646	
12	L/H(FrQm)2		0.002460	0.002460	0.002460	0.002460	0.002460	
13		11+12	0.018888	0.018893	0.018893	0.018916	0.018916	
14	In	10/13	214.592	214.566	214.565	214.454	214.454	
15	M=Pn-Pn-1			164	164	164	164	
16	N=In+In-1			429.158	429.157	429.020	429.020	
17	M x N	15x16			70264		70264	
18	SUM(MxN)	SUM17			70264		140528	

FORM C-122E WORKSHEET FOR STEPWISE CALCULATION (SURFACE) PRESSURE (Pc & Pw)

COMPANY :	TEXACO EXP & PROD		LEASE :	HARR B	WELL NO. :	5	DATE :	10 21 91	
UNIT :	0	SECTION :	0	TOWNSHIP :	0	RANGE :	0		
L :	5519	H :	5519	L/H :	1.0	G/GMIX :	0.679		
CO2 :	1.74	N2 :	2.02	H2S :	0				
d :	2.441	Fr :	0.010763	Qm :	0.000	(L/H)(FrQm)^2 :	0.000000		
		PCR :	670	TCR :	375				

LINE	ITEM	SOURCE	1	2	3	4	5	6	
1	H		5519	2760		0			
2	GH		3747.401	1873.70		0			DELTA P = 348.8
3	37.5GH		140528	70264		0			
									Pw = 1973.7
4	Pc or Pn		2322.6	2151.2	2149.7	1977.0	1973.4	1973.6	
5	Pr		3.47	3.21	3.21	2.95	2.95	2.95	
6	T		589.19	561.595	561.595	534	534	534	
7	Tr		1.57	1.50	1.50	1.42	1.42	1.42	
8	Z		0.809	0.772	0.772	0.728	0.728	0.728	
9	P/ZP/Z	4/8	2873.7	2787.5	2785.4	2714.8	2709.4	2709.7	
10	P/TZ	9/6	4.8773	4.9635	4.9598	5.0840	5.0738	5.0743	
11	Ln10^2/1000	(10)2/100							
12	L/H(FrQm)2								
13		11+12							
14	In	10/13	205.031	201.472	201.619	196.697	197.090	197.071	
15	M=Pn-Pn-1			171	173	173	176	176	
16	N=In+In-1			406.504	406.651	398.316	398.709	398.690	
17	M x N	15x16			70289			70235	
18	SUM(MxN)	SUM17	140528		70238				

FORM C-122E WORKSHEET FOR STEPWISE CALCULATION (SURFACE) PRESSURE (Pc & Pw)

COMPANY :TEXACO EXP & PROD LEASE :HARR B WELL NO. : 5 DATE : 10 21 91

UNIT : 0 SECTION : 0 TOWNSHIP : 0 RANGE : 0

L : 5519 H : 5519 L/H : 1.0 G/GMIX : 0.679

CO2 : 1.74 N2 : 2.02 H2S : 2.02

d : 2.441 Fr :0.010763 Qm : 0.000 '(L/H)(FrQm)0.000000

PCR : 670 TCR : 375

LINE	ITEM	SOURCE	1	2	3	4	5	6	
1	H		5519	2760		0			
2	GH		3747.401	1873.70		0			DELTA P = 342.9
3	`37.5GH		140528	70264		0			
									Pw = 1942.0
4	Pc or Pn		2284.8	2116.3	2114.9	1945.1	1941.6	1941.8	
5	Pr		3.42	3.16	3.16	2.90	2.90	2.90	
6	T		589.19	561.595	561.595	534	534	534	
7	Tr		1.57	1.50	1.50	1.42	1.42	1.42	
8	Z		0.810	0.772	0.772	0.729	0.729	0.729	
9	P/ZP/Z	4/8	2826.3	2740.1	2738.1	2666.8	2662.0	2661.8	
10	P/TZ	9/6	4.7970	4.8791	4.8757	4.9939	4.9851	4.9846	
11	Ln10^2/1000	(10)2/100							
12	L/H(FrQm)2								
13		11+12							
14	In	10/13	208.464	204.954	205.100	200.243	200.598	200.618	
15	M=Pn-Pn-1			169	170	170	173	173	
16	N=In+In-1			413.418	413.564	405.343	405.699	405.718	
17	M x N	15x16			70289			70242	
18	SUM(MxN)	SUM17	140528		70239				

FORM C-122E WORKSHEET FOR STEPWISE CALCULATION (SURFACE) PRESSURE (Pc & Pw)

COMPANY	:TEXACO EXP & PROD		LEASE	:HARR B	WELL NO.	: 5	DATE	: 10 21 91	
UNIT	: 0	SECTION	: 0	TOWNSHIP	: 0	RANGE	: 0		
L	: 5519	H	: 5519	L/H	: 1.0	G/GMIX	: 0.679		
CO2	: 1.74	N2	: 2.02	H2S	: 0				
d	: 2.441	Fr	:0.010763	Qm	: 0.000	'(L/H)(FrQm)	0.000000		
		PCR	: 670	TCR	: 375				

LINE	ITEM	SOURCE	1	2	3	4	5	6	
1	H		5519	2760		0			
2	GH		3747.401	1873.70		0			DELTA P = 287.4
3	'37.5GH		140528	70264		0			
									Pw = 1654.5
4	Pc or Pn		1941.9	1799.9	1799.0	1656.3	1654.3	1654.4	
5	Pr		2.90	2.69	2.69	2.47	2.47	2.47	
6	T		587.19	561.595	561.595	534	534	534	
7	Tr		1.57	1.50	1.50	1.42	1.42	1.42	
8	Z		0.816	0.784	0.784	0.747	0.747	0.747	
9	P/ZP/Z	4/8	2381.3	2296.6	2295.4	2218.3	2215.2	2215.4	
10	P/TZ	9/6	4.0416	4.0894	4.0872	4.1542	4.1483	4.1486	
11	Ln10^2/1000	(10)2/100							
12	L/H(FrQm)2								
13		11+12							
14	In	10/13	247.426	244.536	244.664	240.722	241.061	241.044	
15	M=Pn-Pn-1			142	143	143	145	145	
16	N=In+In-1			491.962	492.089	485.386	485.724	485.707	
17	M x N	15x16			70282			70243	
18	SUM(MxN)	SUM17	140528		70246				

FORM C-122E WORKSHEET FOR STEPWISE CALCULATION (SURFACE) PRESSURE (Pc & Pw)

COMPANY :	TEXACO EXP & PROD		LEASE :	HARR B	WELL NO. :	5	DATE :	10 21 91	
UNIT :	0	SECTION :	0	TOWNSHIP :	0	RANGE :	0		
L :	5519	H :	5519	L/H :	1.0	G/GMIX :	0.67		
CO2 :	1.74	N2 :	2.02	H2S :	2.02				
d :	2.441	Fr :	0.010763	Qm :	0.000	`(L/H)(FrQm)	0.000000		
		PCR :	670	TCR :	375				

LINE	ITEM	SOURCE	1	2	3	4	5	6	
1	H		5519	2760		0			
2	GH		3747.401	1873.70		0			DELTA P = 288.6
3	`37.5GH		140528	70264		0			
									Pw = 1661.1
4	Pc or Pn		1949.7	1807.2	1806.3	1662.9	1660.9	1661.0	
5	Pr		2.91	2.70	2.70	2.48	2.48	2.48	
6	T		589.19	561.595	561.595	534	534	534	
7	Tr		1.57	1.50	1.50	1.42	1.42	1.42	
8	Z		0.816	0.783	0.783	0.746	0.746	0.746	
9	P/ZP/Z	4/8	2390.1	2307.0	2305.8	2228.9	2226.1	2225.8	
10	P/TZ	9/6	4.0566	4.1080	4.1057	4.1739	4.1687	4.1681	
11	Ln10^2/1000	(10)2/100							
12	L/H(FrQm)2								
13		11+12							
14	In	10/13	246.509	243.427	243.563	239.585	239.881	239.919	
15	M=Pn-Pn-1			143	143	143	145	145	
16	N=In+In-1			489.936	490.072	483.147	483.444	483.482	
17	M x N	15x16			70283			70250	
18	SUM(MxN)	SUM17	140528		70244				