

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 Expl. & Prod.						Lease or Unit Name E.H.B. Phillips 'C'					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 4-2-98		Well No. 2			
Completion Date 4-2-98		Total Depth 7400		Plug Back TD 7400		Elevation		Unit Ltr. - Sec. - TWP - Rge. H 10 20-S 37-E			
Csg. Size 5 1/2	WL 15.5	d 4.875	Set At 7400	Perforations: From: 7088 To: 7198				County Lea			
Tbg. Size 2 7/8	WL 6.5	d 2.441	Set At 6990	Perforations: From: To:				Pool			
Type Well - Single - Bradenhead - G.G. or G.Q. Multiple Single						Packer Set At 6990		Formation Abo			
Producing Thru Tbg 6990		Reservoir Temp. °F 131		Mean Annual Temp. °F 60°		Bare. Press - P _a 13.2		Connection Air			
L 6990	II 6990	G _g .672	% CO ₂ .395	% N ₂ 2.513	% H ₂ S 0	Prover 0	Meter Run 3.068	Taps F/g			

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
SI						1850	64°	PK	
1.	3.068 X 1.500		100	5"	67°	1778	64°		
2.	3.068 X 1.500		140	11"	69°	1665	64°		60 min
3.	3.068 X 1.500		150	22"	64°	1412	64°		60 min
4.	3.068 X 1.500		150	34"	64°	1086	64°		60 min
5.									60 min

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)		Pressure P _m	Flow Temp. Factor Ft	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	11.13	23.7	113.2	.9933	1.220	1.054	336
2.	11.13	41.0	153.2	.9915	1.220	1.052	580
3.	11.13	59.9	163.2	.9962	1.220	1.054	854
4.	11.13	74.4	163.2	.9962	1.220	1.054	1060
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl
1.	.78	527	1.40	.901	N/A	
2.	.78	529	1.41	.903	N/A	
3.	.78	525	1.40	.901	N/A	
4.	.78	525	1.40	.901	N/A	
5.						

P _r 1863.2		P _c 3471.5	
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NO.	P _c ²	P _w	P _w ²	P _c ² - P _w ²
1.	3208.4	1791.4	3209.2	262.3
2.	2816.4	1678.9	2818.8	652.7
3.	2031.2	1427.1	2036.7	1434.8
4.	1208.2	1103.2	1217.2	2254.4
5.				

$$1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.53$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.25$$

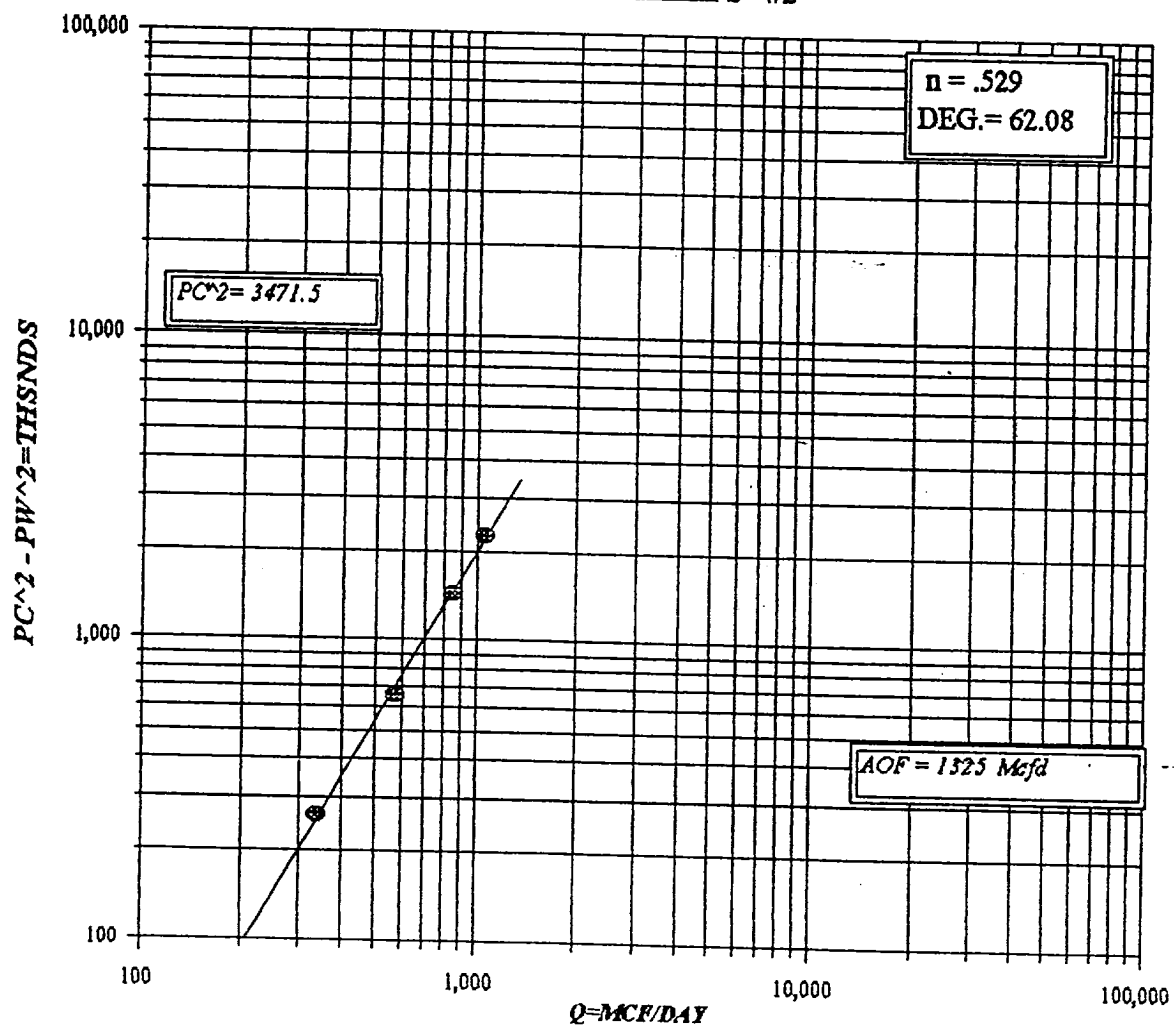
$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1325$$

Absolute Open Flow 1325	Mcf/d @ 15.025	Angle of Slope θ 62.08	Slope, n .529
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Remarks: ***No liquid made during test**

Approved By Division	Conducted By: Pro Well Testing	Calculated By: M.B.	Checked By: B.M./
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TEXACO E & P.
E.H.B. PHILLIPS #2



COMPANY: TEXACO E&P
 UNIT : H
 L : 6990
 XCO2 : 0.395
 d : 2.441

LEASE : E.H.B. PHIPPIPS C
 SECTION : 10
 H : 6990
 ZN2 : 2.513
 Fr : 0.010763

WELL NO. : 2
 TOWNSHIP : 20
 L/H : 1
 G/GMIX : 0.672
 H2S :
 GH : 4697.3
 DATE : 4/2/98
 RANGE : 37

Pc = 1863.2
 Pc2 = 3471.5
 Pt2 = 3208.4
 Pw = 1791.4
 2816.4
 2031.2
 1208.2

VOL 1 : 336
 VOL 2 : 580
 VOL 3 : 854
 VOL 4 : 1060

PSIA 1 : 1791.2
 PSIA 2 : 1678.2
 PSIA 3 : 1425.2
 PSIA 4 : 1099.2

RESV. TEMP 143.9
 SHUT-IN PR= 1863.2

PCR : 670
 TCR : 375

Pc2-Pw2 = 262.3
 652.7
 1434.8
 2254.4

Pw2 = 3209.2
 2818.8
 2036.7
 1217.2

n = 0.529

Pc2/(Pc2-Pw2) = 13.235
 5.319
 2.420
 1.540

LINE	RATE 1		RATE 2		RATE 3		RATE 4	
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1 QM	0.336	0.336	0.580	0.580	0.854	0.854	1.060	1.060
2 TW	534	534	534	534	534	534	534	534
3 Ts	603.9	603.9	603.9	603.9	603.9	603.9	603.9	603.9
4 T	569.0	569.0	569.0	569.0	569.0	569.0	569.0	569.0
PR (est)	2.67		2.50		2.13		1.64	
5 Z(est)	0.776	0.768	0.782	0.772	0.801	0.789	0.833	0.820
6 TZ	441.3	436.7	444.9	439.4	455.5	449.7	473.7	466.8
7 GH/TZ	10.644	10.756	10.558	10.690	10.312	10.469	9.916	10.063
8 eS	1.491	1.497	1.486	1.493	1.472	1.481	1.450	1.458
9 1-e-S	0.329	0.332	0.327	0.330	0.321	0.325	0.311	0.314
10 Pt	1791.2	1791.2	1678.2	1678.2	1425.2	1425.2	1099.2	1099.2
11 Pt2 /1000	3208.4	3208.4	2816.4	2816.4	2031.2	2031.2	1208.2	1208.2
12 Fr	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763
13 Fc=FrTZ	4.750	4.700	4.789	4.729	4.903	4.829	5.099	5.024
14 FcQm	1.60	1.58	2.78	2.74	4.19	4.12	5.40	5.33
15 L/H(FcQm)	2.5	2.5	7.7	7.5	17.5	17.0	29.2	28.4
16 Fw	0.838252	0.827912	2.522041	2.484979	5.622431	5.522875	9.070504	8.9152498
17 Pw2	3209.2	3209.2	2818.9	2818.8	2036.8	2036.7	1217.3	1217.2
18 Ps2	4783.6	4803.7	4188.1	4208.9	2998.4	3015.9	1765.6	1775.1
19 Ps	2187.1	2191.7	2046.5	2051.6	1731.6	1736.6	1328.8	1332.3
20 P	1989.2	1991.5	1862.3	1864.9	1578.4	1580.9	1214.0	1215.8
21 Pr	2.97	2.97	2.78	2.78	2.36	2.36	1.81	1.81
22 Tr	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52
23 Z	0.768	0.768	0.772	0.772	0.789	0.788	0.820	0.820

[Pc2/(Pc2-Pw2)]n = 3.921
 2.421
 1.596
 1.257

ADF= 0
 1.317
 1.404
 1.363
 1.325

FORM C122-D



Laboratory Services, Inc.

1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline
Attention: Mr. Ray Ables
P. O. Box 791
Hobbs, New Mexico 88241

SAMPLE
IDENTIFICATION: E.H.B. Phillips C #2
COMPANY: Texaco
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 3/31/98
ANALYSIS DATE: 3/31/98
PRESSURE - PSIG 150
SAMPLE TEMP. °F
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Ray Ables
ANALYSIS BY: Vickie Walker

REMARKS: Sample taken @ the meter run.

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	2.513	
Carbon Dioxide (CO2)	0.395	
Methane (C1)	85.551	
Ethane (C2)	6.454	1.722
Propane (C3)	2.519	0.692
I-Butane (IC4)	0.306	0.100
N-Butane (NC4)	0.850	0.267
I-Pentane (IC5)	0.271	0.099
N-Pentane (NC5)	0.343	0.124
Hexane Plus (C6+)	0.798	0.827
	100.000	8.831

BTU/CU.FT. - DRY 1142
AT 14.650 DRY 1138
AT 14.650 WET 1118
AT 14.73 DRY 1145
AT 14.73 WET 1125

MOLECULAR WT. 19.4543

SPECIFIC GRAVITY -
CALCULATED 0.672
MEASURED