

EL PASO NATURAL GAS COMPANY
MINIMUM CONTRACT TEST
 (To Determine Wellhead Deliverability at 100 PSIG)

Company Two States Oil Company Lease McQuatters Well No. 1
 Hor. J Sec. 11 Twp. 21 S R. 36 E County Lea
 Pool Eumont Type Well Single Date of Test 8-17-56
 Production Rate During Testing x Gravity .665 3 in. Pressure 13.2
 by Previous Test .704 Date of Previous Test 8-17-56

FLOW DATA					TUBING DATA		CASING DATA		Duration	
No.	XXXXX Line Size	x XXXXX Orifice Size	Press. psig	Diff. h _w	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	of Flow Hr.
Shut-in						954				72
1.	4	x 1.000	581	4.2 ²	82	584				24
2.										

No.	Coefficient (24-Hour)	$\sqrt{h_w P_w}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	6.135	102.36		.9795	.9498	1.059	607
2.							

$$\left[\frac{P_1^2 - P_2^2}{P_1^2 - P_2^2} \right]^{n_1}$$

935

12.8

356.6

$$\left[\frac{P_1^2 - P_2^2}{P_1^2 - P_2^2} \right] = \frac{922.2}{578.4} \times 1.594 = P$$

$$\text{Flow Factor } .2024883 \times (n_1) .704 = .142551 \quad \text{Artifice} = 1.389 = P^{n_1}$$

$$607 \times P^{n_1} 1.389 = 843 = P_1$$

I hereby swear and affirm that the
 information given above is true and
 correct.

Name Earl G. Smith
 Gas Engineer

Witness my hand

at Daile Southern

My name EPNG

Name L. A. Southern

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea
 Initial Annual Special X Date of Test 8-13 to 8-17-56
 Company Two States Oil Company Lessee McQuatters Well No. 1
 Unit J Sec. 11 Twp. 21 S Rge. 36 E Farmowner EPNG
 Casing 5 1/2 In. I.D. 3650 Feet To 3628
 Tubing 2 In. I.D. 3620 Feet
 Gas Pay: From 3218 To 3628 3620 x .665 2407 13.2
 Producing From: Casing X Tubing X Type Well Single
Re- Single-Wellhead: 1, 1, or 1, 1, 1
 Date of Completion: 2-17-53 Broken

No.	Casing Data			Tubing Data			Ground Data		
	Line Size	x	Line Size	Press. psig	Diff. Pw	Temp. °F.	Press. psig	Temp. °F.	Press. psig
1.	4	x	1.000	581	2.6 ²	76	954	784	72
2.	4	x	1.000	588	3.1-3.3 ²	78	780	719	24
3.	4	x	1.000	591	3.6-3.9 ²	81	638	666	24
4.	4	x	1.000	581	4.2 ²	82	584	597	24
5.									

No.	Coefficient (24-Hour)		Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCF PD
	Flg	$\sqrt{P_w P_v}$					
1.	6.135	63.37		.9850	.9498	1.056	384
2.	6.135	75.99		.9831	.9498	1.056	459
3.	6.135	88.47		.9804	.9498	1.059	535
4.	6.135	102.36		.9795	.9498	1.059	607
5.							

Gas Liquid Hydrocarbon Ratio Mc/bbl. Specific Gravity Separator Gas 967
 Gravity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid 935
 F_g 9.936 (1-e⁻³) .153 F_g 967 F_g 935

No.	P ₁ (psia)		P ₂	P ₂ ² -P ₁ ²	P ₂ /P ₁	P ₂ ² /P ₁ ²	P ₂ ² -P ₁ ²
	P ₁	P ₂					
1.	793.2	629.2	305.8				635.5 299.5
2.	715.2	511.5	423.5				536.1 398.9
3.	651.2	424.1	510.9				461.3 473.7
4.	597.2	356.6	378.4				372.3 563
5.							

Wellhead Potential: 860 MCFPD: 55 .704 Conducted by: Mabe & Dedry
 OF Potential: 860 MCFPD: 55 .704 Witnessed by: Edward Mabe
 Calculated by: Edward Mabe