

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 JUN 25 1969 9:22 AM '69	
Company Humble Oil and Refining Co.		Connection None	
Pool Tubb		Formation Tubb	
Completion Date		Total Depth 7700	Plug Back TD 6800
		Elevation 3471	
Farm or Lease Name New Mexico State V		Well No. 5	
Csg. Size 5 1/2	Wt. 14-15.5-17	Set At 7700	Perforations: From 6200 To 6262
Thg. Size 2 3/8	Wt. 4.7	Set At 6276	Perforations: From Open To End
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At 6182	County Lea
Producing Thru Tubing		Reservoir Temp. °F 113 @ 7700	Mean Annual Temp. °F 60
		Baro. Press. - P _a 13.2	State New Mexico
L 6231	H 6231	Gg .671	% CO ₂ % N ₂ % H ₂ S
Prover 2"		Meter Run 4"	Taps Flg.

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
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	
SI				1047		80					
1.	2	x	1/4	727		71	727	71			1
2.	2	x	5/16	560		70	560	70			1
3.	4	x	2.00	58	6.7	88	465	88			1
4.	4	x	2.00	60	7.15	85	229	86			1
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, Fpv	Rate of Flow Q, Mcfd
1	1.087		740.2	.9896	1.221	1.080	1,051
2	1.672		573.2	.9905	1.221	1.061	1,230
3	19.81	56.61	71.4	.9741	1.221	-----	1,333
4	19.81	61.13	73.1	.9671	1.221	-----	1,430
5							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.	1.11	531	1.39	.857	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	.86	530	1.39	.839	Specific Gravity Separator Gas _____
3.					Specific Gravity Flowing Fluid _____
4.					Critical Pressure _____ P.S.I.A.
5.					Critical Temperature _____ °R

P _c 1050.2 P _c ² 1124.0		(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{1124.0}{1016.4}$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.053$	
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	
1	547.9		571.4	552.6	
2	328.6		361.8	762.2	
3	228.7		269.6	854.4	
4	58.7		107.6	1016.4	
5					

Absolute Open Flow 1,506 Mcfd @ 15.025		Angle of Slope θ 63	Slope, n .510
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Remarks: 1st and 2nd rates through 2" Prover.
 3rd and 4th rates through 4" Meter Run.

Approved By Commission:	Conducted By: Jack T. Littlefield Donald R. Read	Calculated By: Jack T. Littlefield Donald R. Read	Checked By: J. Pinkerton
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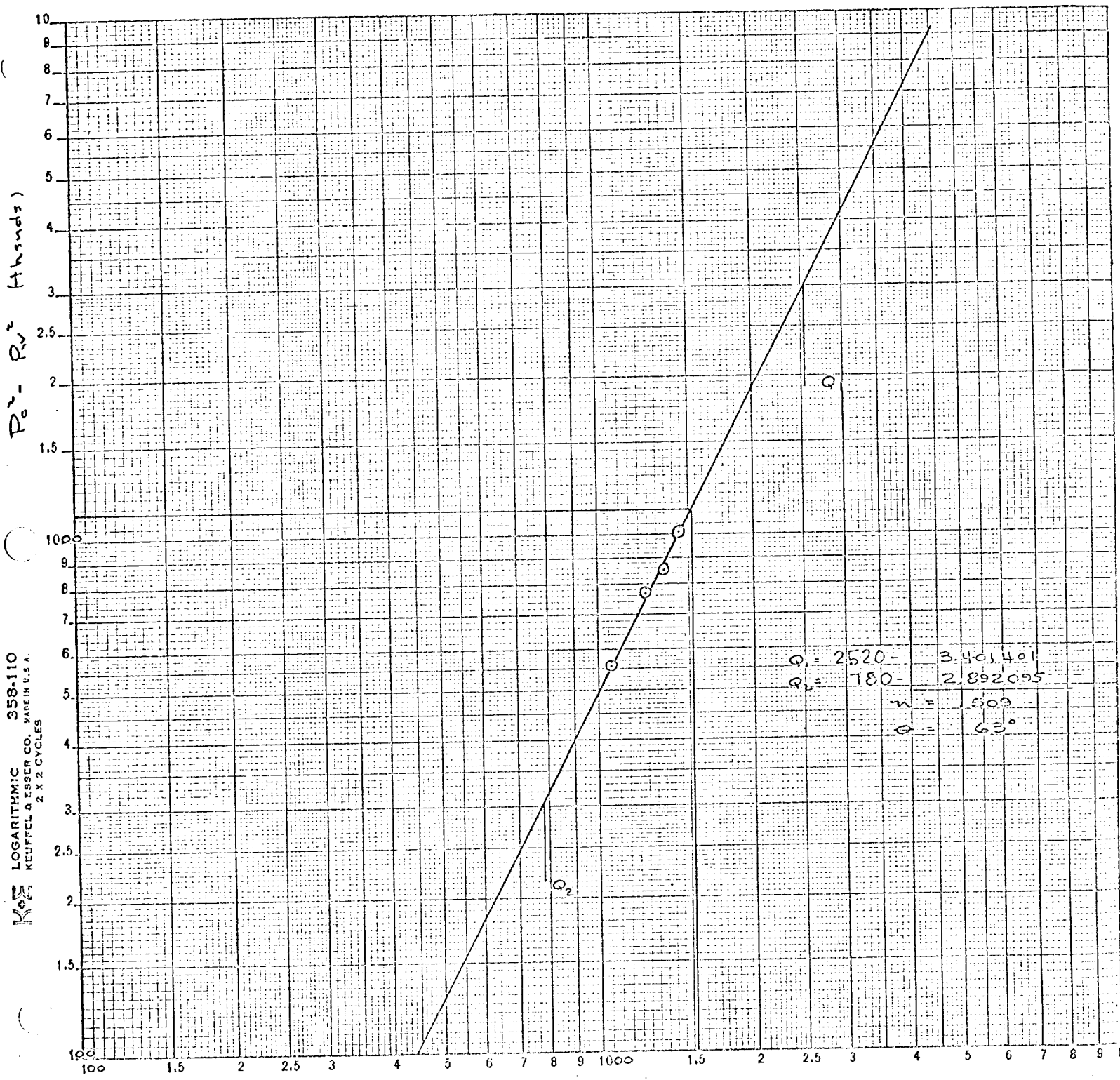
HUMBLE OIL & REFINING CO.
 Agent

FIELD DATA SHEET (Not Required To File)

Type Test	☒ Initial	☐ Annual	☐ Special	Test Date	5-19-69	Lease No. or Serial No.	B-935
Company	Humble Oil and Refining Company			Connection		Allottee	
Field	Tubb Gas	Reservoir	Tubb Gas	Location	Unit M	Unit	M
Completion Date	5-13-69	Total Depth	7700	Plug Back TD	6800	Elevation	3471 Rotary
Csg. Size	5 1/2	Wt.	14-15.5-17	d	Set At	7700	Perforations: From 6200-6262 To
Tbg. Size	2 3/8	Wt.	4.70	d	Set At	6276	Perforations: From Open end To
Type Completion (Describe)	Gas Well			Packer Set At	6182	Sec.	10
Producing Thru	L	Reservoir Temp. F	H	Mean Annual Temp. F	G	Baro. Press. - P _a	871
				% CO ₂	% N ₂	% H ₂ S	Prover
				% CO ₂	% N ₂	% H ₂ S	Meter Run
				% CO ₂	% N ₂	% H ₂ S	Taps
REMARKS						Lea County	

[illegible]

HUMBLE OIL & REFINING Co.
 N.M. STATE V # 5
 M 10-21-37
 LEA COUNTY, N.M.
 5-19-69



LOGARITHMIC 358-110
 KEUFFEL & ESSER CO. MADE IN U.S.A.
 2 X 2 CYCLES

$Q_1, MC FPD$

WORKSHEET FOR CALCULATION OF ST. C COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Revised 9-1-65

COMPANY Humble Oil Co LEASE STATE 1 WELL NO. 5 DATE 5-19-69

LOCATION: Unit M Section 10 Township 21 Range 37

L. 6231 H. 6231 L/H 1.000 G. .671 % CO₂ % N₂ % H₂S

d. 1995 F_r .018231 GH 4181 P_{cr} 669 T_{cr} 382
TABLE IX & X TABLE IX & X

LINE	13T	P _r T _s	2nd RATE	3rd RATE	4th RATE
Q _m	1.051	1.230	1.333	1.430	
2 T _w (W.H. °R)	531	530	548	546	
3 T _s (B.H. °R)	573	573	573	573	
4 T = ($\frac{T_w + T_s}{2}$)	552	552	561	560	
5 Z (Est.)	.885	.910	.895	.915	.921
6 TZ	489	502	494	512	516
7 GH/TZ	8.550	8.729	8.464	8.150	8.103
8 e ^s (Table XIV)	1.378	1.387	1.374	1.357	1.356
9 1-e ^s (Table XIV)	.274	.268	.272	.263	.263
10 P _t	740.2	573.2	373.2	478.2	247.2
11 P _t 2/1000	547.9	328.6	328.6	228.7	58.7
F _r (Table XV)	.018231	.018231	.018231	.018231	.018231
13 F _c = F _r TZ	8.9150	9.152	9.006	8.988	9.353
14 F _c Q _m	9.370	11.257	11.071	11.055	12.442
15 L/H (F _c Q _m) ²	87.797	84.236	122.70	122.21	155.45
16 F _w = L/H (F _c Q _m) ² (1-e ^s)	24.1	34.0	33.4	33.2	40.9
17 P _w ² = P _t ² + F _w	572.0	362.6	362.0	269.6	269.6
18 P _s ² = e ^s P _w ²	788.2	495.7	497.4	365.8	365.8
19 P _s	897.8	890.2	705.3	705.1	604.8
20 P = ($\frac{P_t + P_s}{2}$)	814.0	638.7	639.3	541.5	541.5
21 P _r = (P/P _{cr})	1.22	.95	.96	.81	.81
22 T _r = (T/T _{cr})	1.45	1.45	1.45	1.47	1.47
23 Z (Table XI)	.867	.895	.894	.913	.913