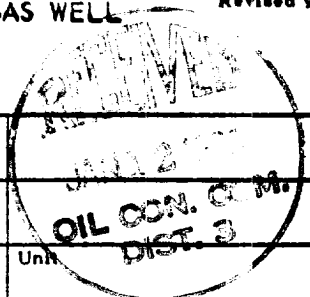


NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-63



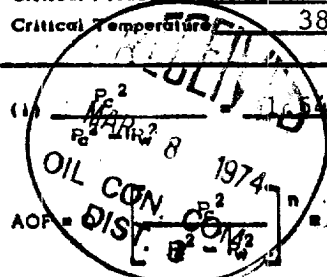
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 1-4-68	
Company PAN AMERICAN PETR. CORP.				Connection	
Pool Wildcat				Formation Cutler	
Completion Date 12-5-67		Total Depth 5106'		Elevation 5460' GL	
Casing Size 7-5/8"		Set At 2204		Perforations: From 1868 To 1878	
Tubing Size 2-3/8"		Set At 1875		Perforations: From Open ended To	
Type Well - Single - Brdenhead - G.G. or G.O. Multiple Single				Packer Set At 2000	
Producing Thru Tubing		Reservoir Temp. °F 104 @ 1875		State New Mexico	
L 1875		H 1875		County San Juan	
Gg 0.668		% CO ₂ 0		Prover --	
% N ₂ 0		% H ₂ S 0		Meter Run --	
Taps --					

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	SI						808		810		72 hr.
1.	4	X 2"		2.94		26	714	54	717	54	1 hr.
2.	4	X 2"		8.8		30	628	49	632	49	1 hr.
3.	4	X 2"		13.26		33	516	45	617	45	1 hr.
4.	4	X 2"		17.19		36	420	45	550	45	1 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure Inches Hg P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1			6	1.0058	0.9477	1.0	914
2			18	1.0107	0.9477	1.0	1688
3			27	1.0147	0.9477	1.0	2162
4			35	1.0147	0.9477	1.0	2543
5							

NO.	P _r	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	.056085	514	1.415	0.930	A.P.I. Gravity of Liquid Hydrocarbons	Deg.
2	.4947	509	1.407	0.938	Specific Gravity Separator Gas	XXXXXXX
3	.4093	505	1.4016	0.948	Specific Gravity Flowing Fluid	XXXXX
4	.3356	505	1.4016	0.957	Critical Pressure	669 P.S.I.A.
5					Critical Temperature	381 °R

NO.	P _c ²	P _w	P _w ²	P _c ² - P _w ²
1	527.37	23.1	533.65	138.75
2	409.86	20.78	431.19	241.2
3	279.00	17.72	314.02	358.32
4	186.80	15.35	236.27	436.13
5				



Absolute Open Flow 3495 Mcfd @ 15.025		Angle of Slope θ 0.735	
Remarks:			
Approved By Commission:	Conducted By: <i>Joseph D. Bridger</i>	Calculated By: <i>Joseph D. Bridger</i>	Checked By:

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

C-122D
Adopted 9-1-65

COMPANY Pan American Petr. Corp. LEASE Navajo Tribal "AD" WELL NO. 1 DATE 1-8-68

LOCATION: Unit G Section 13 Township 30-N Range 21-W

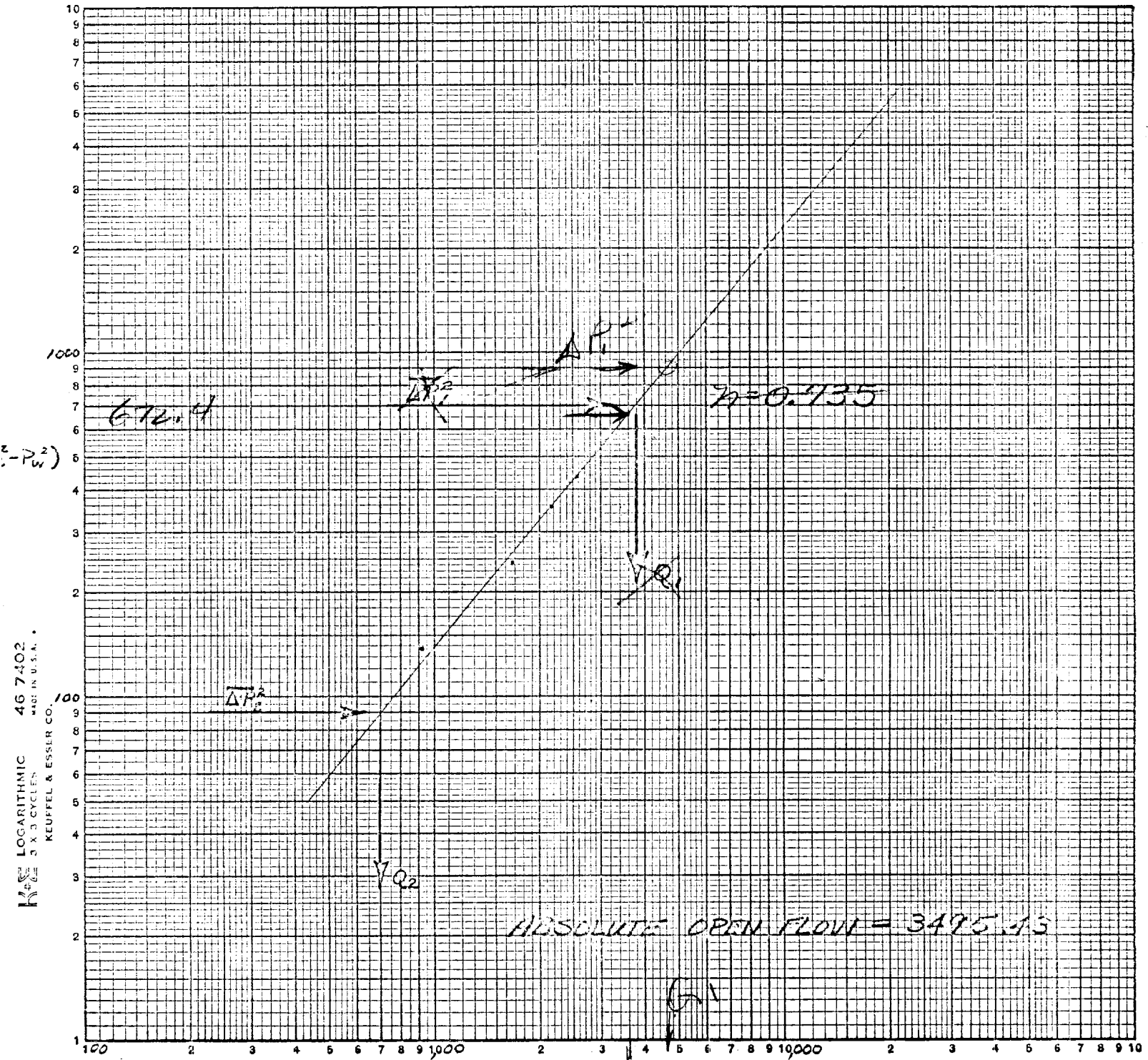
L 1875 H 1875 L/H 1.00 G 5460 % CO₂ 0 % N₂ 0 % H₂S 0

d 1.995 F_r .018231 GH 1252.5 P_{Cr} 669 T_{Cr} 381

TABLE IX & X

LINE	POINT NO. 1	POINT NO. 2	POINT NO. 3	POINT NO. 4
1 Q _m	.9146	1.688	2.162	2.544
2 T _w (W.H. °R)	514	509	505	505
3 T _s (B.H. °R)	564	564	564	564
4 T = ($\frac{1}{2}T_w + T_s$)	539	536	534	534
5 Z (Est.)	1.00	0.93	0.938	0.95
6 TZ	539	498.48	500.89	507.3
7 GH/TZ	2.32	2.51	2.50	2.47
8 e ^s (Table XIV)	1.091	1.099	1.098	1.097
9 1-e ^s (Table XIV)	0.083	0.089	0.089	0.088
10 P _t	726.2	640.2	528.2	432.2
11 P _t ² /1000	527.37	409.86	279.00	186.80
12 F _r (Table XV)	0.018231	0.01823	0.01823	0.01823
13 F _c = F _r TZ	9.83	9.09	9.13	9.25
14 F _c Q _m	9.00	15.34	19.74	23.53
15 L/H (F _c Q _m) ²	81.0	235.32	389.67	553.66
16 F _w = L/H (F _c Q _m) ² (1-e ^s)	6.72	21.18	34.68	48.72
17 P _w ² = P _t ² + F _w	534.09	431.04	313.68	235.52
18 P _s ² = e ^s P _w ²	582.70	473.73	344.42	258.37
19 P _s	24.12	21.75	18.56	16.09
20 P = ($\frac{P_t + P_s}{2}$)	375.16	330.97	273.38	224.15
21 P _r = (P/P _{Cr})	.56077	.4947	.4093	.3355
22 T _r = (T/T _{Cr})	1.415	1.407	1.4016	1.4016
23 Z (Table XI)	0.930	0.938	0.948	0.957

COMPANY PAN AMERICAN PETROLEUM CORP
WELL NAVAJO TRIBAL "AD" #1
LOCATION SECT 13. T-30-N R-21-W
DATE 1-4-68



KEUFFEL & ESSER CO.
 LOGARITHMIC
 3 X 3 CYCLES
 46 7402
 MADE IN U.S.A.

$$\overline{\Delta P_1^2} \quad P_c^2 - P_w^2 = 700$$

$$\overline{\Delta P_2^2} \quad P_c^2 - P_w^2 = 90$$

$$Q_1 = 3800 \quad \text{4610}$$

$$Q_2 = 700$$

Q, MCFD, hcf

$$\text{LOG } Q_1 = 3.57976$$

$$\text{LOG } Q_2 = 2.84510$$

$$n = 0.73466$$

$$n = 0.735$$