STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

RECEIVED
DEC 15 1981
O. C. D.
ARTESIA, OFFICE

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [x] Initial [ ] Annual [ ] Special			Test Date: 11-2-81	
Company: Yates Petroleum Corporation		Connection: Transwesten Pipeline Company		Unit
Pool: ~~Undesignated Abo~~ Pecos Slope - Abo Gas		Formation: Abo		
Completion Date: 6-22-81	Total Depth: 4300'	Plug Back TD: 4296'	Elevation: 3835'	Farm or Lease Name: Hahn "NH" Federal
Csg. Size: 4-1/2" / Wt.: 9.5# / d: 4.090" / Set At: 4297		Perforations: From 3753 To 3997		Well No.: 2
Tbg. Size: 2-3/8" / Wt.: 4.7# / d: 1.995 / Set At: 3690'		Perforations: From – To –		Unit: A / Sec.: 9 / Twp.: 7S / Rge.: 25E
Type Well – Single – Bradenhead – G.C. or G.O. Multiple: Single		Packer Set At: –		County: Chaves
Producing Thru: tubing	Reservoir Temp. °F: 96 @ 3875	Mean Annual Temp. °F: 62	Baro. Press. – P_a: 13.2	State: New Mexico
L: 3900 / H: 3900	Gg: .652	% CO_2: 0.92	% N_2: 4.92	% H_2S: 0 / Prover: – / Meter Run: 2" / Taps: Flanged

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							1000				days
1.	2.067	x	.875	310	83.0	75	590	67			24 hrs
2.	2.067	x	.875	320	47.7	75	707	67			24 hrs
3.	2.067	x	.875	325	28.8	75	783	67			24 hrs
4.	2.067	x	.875	330	12.3	75	867	67			24 hrs
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	3.729	163.8	323.2	.9859	1.238	1.027	766
2.	3.729	126.1	333.2	.9859	1.238	1.027	589
3	3.729	98.7	338.2	.9859	1.238	1.028	461
4.	3.729	65.0	343.2	.9859	1.238	1.028	304
5.							

NO.	P_t	Temp. °R	T_r	Z
1	.49	535	1.49	.949
2.	.50	535	1.49	.948
3.	.51	535	1.49	.947
4.	.52	535	1.49	.946
5				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Dry Deg.

Specific Gravity Separator Gas	.652	XXXXXXXXX
Specific Gravity Flowing Fluid	XXXXX	.652
Critical Pressure	665 P.S.I.A.	665 P.S.I.A.
Critical Temperature	360 °R	360 °R

P_c 1013.2 P_c^2 1026.6

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	363.9		372.1	654.5
2	518.7		523.5	503.1
3	633.9		636.8	389.8
4	774.8		776.0	250.6
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.0966$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.8883$

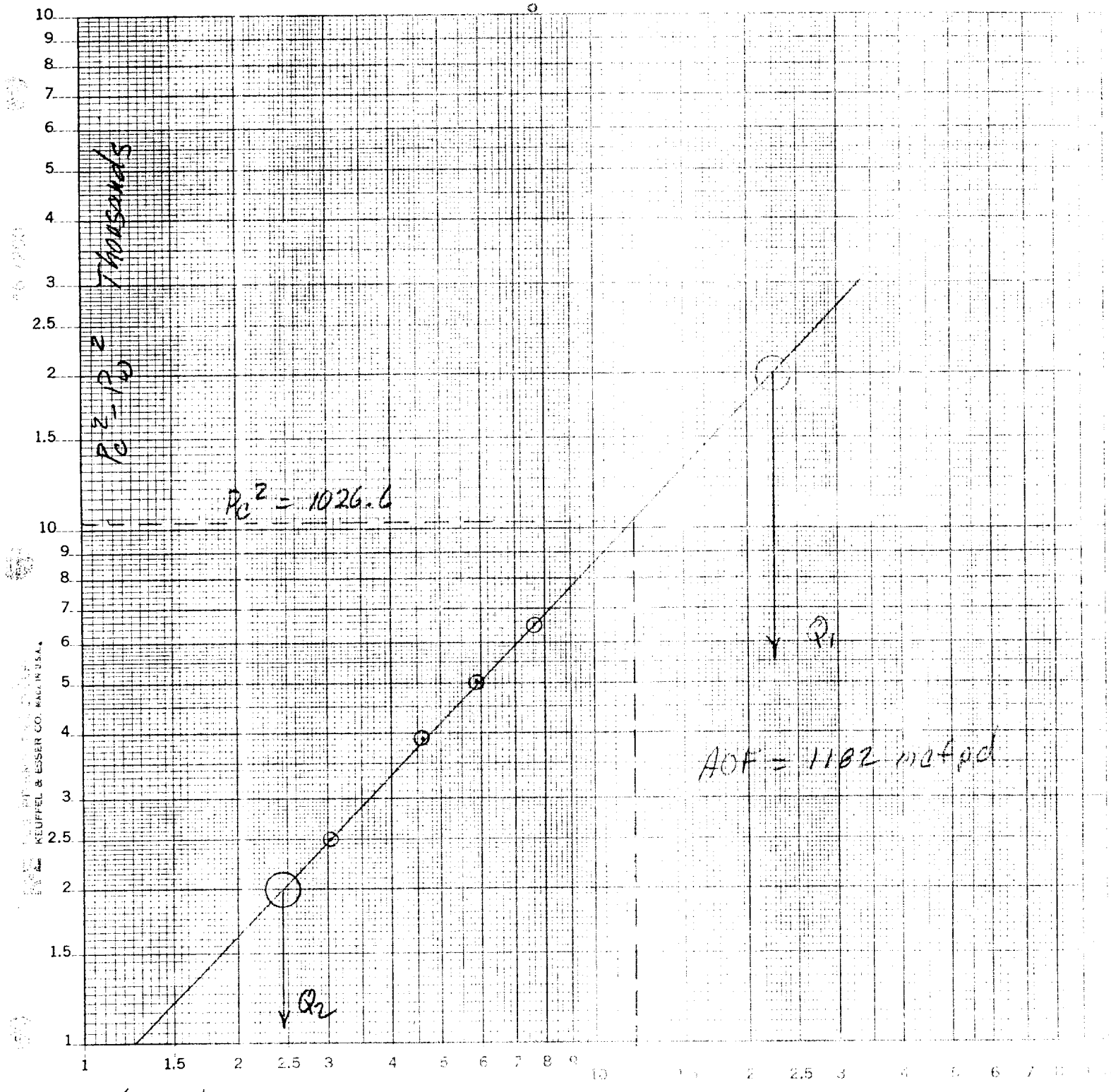
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1182

Absolute Open Flow: 1182 Mcfd @ 15.025 | Angle of Slope θ: | Slope, n: .963

Remarks:

Approved By Division	Conducted By:	Calculated By:	Checked By:
	David Weaver	Al Springer	

Yates Petroleum Corp.
Halin "NN" Fed. #2
Unit A, sec 9, T-15, R-25E
Chaves County, New Mexico



$(P_c^2 - P_w^2)_1 = 2000$

$(P_c^2 - P_w^2)_2 = 200$

$Q_1 = 2,250$

$Q_2 = 245$

$n = .963$

COMPANY Yates Petroleum Corp. LEASE Hahn "NH" Fed WELL NO. #2 DATE 12/11/81

LOCATION: Unit A Section 9 Township 19S Range 25E

L 3900 H 3900 L/H 1.000 G 0.652 % CO_2 0.92 % N_2 4.92 % H_2S 0

d 1.995" F_T .01823 GH 2542 P_{cr} 665 (TABLE IX & X) T_{cr} 360 (TABLE IX & X)

LINE	Rate #1		Rate #2		Rate #3		Rate #4			
1 Q_m	.766		.589		.461		.304			
2 T_w (W.H. °R)	527		527		527		527			
3 T_s (B.H. °R)	556		556		556		556			
4 $T = (\frac{T_w + T_s}{2})$	541.5		541.5		541.5		541.5			
5 Z (Est.)	.905		.890		.879		.869			
6 TZ	490.06		481.94		475.98		470.56			
7 GH·TZ	5.1871		5.275		5.3406		5.4020			
8 e^s (Table XIV)	1.215		1.219		1.222		1.225			
9 $1-e^{-s}$ (Table XIV)	.177		.180		.182		.184			
10 F_c	603.2		720.2		796.2		880.2			
11 P_t^2 / 1000	363.85		518.7		635.9		774.75			
12 F_T (Table XV)	.01823		.01823		.01823		.01823			
13 $F_c = F_T \cdot TZ$	8.9337		8.7857		8.6971		8.5784			
14 $F_c Q_m$	6.8433		5.1748		4.0001		2.6078			
15 $L/H (F_c Q_m)^2$	46.8301		26.778		16.0011		6.8008			
16 $F_w = L/H (F_c Q_m)^2 (1-e^{-s})$	8.2889		4.8201		2.9122		1.2513			
17 $P_w^2 = P_t^2 + F_w$	372.1		523.5		636.8		776.00			
18 $P_s^2 = e^s P_w^2$	452.1		638.2		778.2		950.60			
19 P_s	672.4		798.8		882.17		974.99			
20 $P = (\frac{P_t + P_s}{2})$	574.8		759.5		834.19		927.59			
21 $P_r = (P/P_{cr})$	.9		1.14		1.26		1.39			
22 $T_r = (T/T_{cr})$	1.50		1.50		1.50		1.50			
23 Z (Table XI)	.905		.890		.879		.869			

One copy to be filed in District Office (Work copy acceptable)