

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT A ONE POINT BACK PRESSURE TEST OR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

SEP 19 1979

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 7-16-79		SEP 19 1979	
Company Yates Petroleum Corp.				Connection Transwestern Pipeline Co.			O. C. C. ARTESIA, OFFICE	
Pool E. Eagle Creek Atoka-Morrow				Formation Morrow			Unit	
Completion Date 3-27-79		Total Depth 8400' KB		Plug Back TD 8022' KB		Elevation 3478' KB		Farm or Lease Name Jackson "AT" Com
Csg. Size 5-1/2"	Wt. 17#	d 4.892	Set At 8400' KB	Perforations: From 7992 To 8007' KB			Well No. 9	
Tbg. Size 2-7/8"	Wt. 6.5#	d 2.441	Set At 7961' KB	Perforations: From To			Unit Sec. Twp. Rge. M 13 17S 25E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple				Packer Set At 7961' KB			County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 138 @ 8000'		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2		State New Mexico
L 7994	H 7994	G _g .665	% CO ₂ 0.80	% N ₂ 0.56	% H ₂ S Nil	Prover	Meter Run 2"	Taps Flange

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							2400	80			Days
1.	2.067 x 1.125			205	12	90	2288	81			1 hour
2.				205	25	90	2200	82			1 hour
3.				206	49	90	2102	83			1 hour
4.				207	89	90	1988	85			1 hour
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super. Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	6.393	51.17	218.2	.9723	1.250	1.0184	405
2	6.393	73.86	218.2	.9723	1.250	1.0184	584
3	6.393	103.64	219.2	.9723	1.250	1.0186	820
4	6.393	139.99	220.2	.9723	1.250	1.0187	1108
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.324	550	1.486	.9642	132.5	54.2	0.640	X X X X X X X X	673	370
2	0.324	550	1.486	.9642				X X X X X		
3	0.326	550	1.486	.9638						
4	0.327	550	1.486	.9636						
5										

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1			8463	941
2			7835	1469
3			7150	2154
4			6392	2912
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.195$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3264$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.9462$

Absolute Open Flow 3264 Mcfd @ 15.025		Angle of Slope 47 degrees	Slope, n .93022
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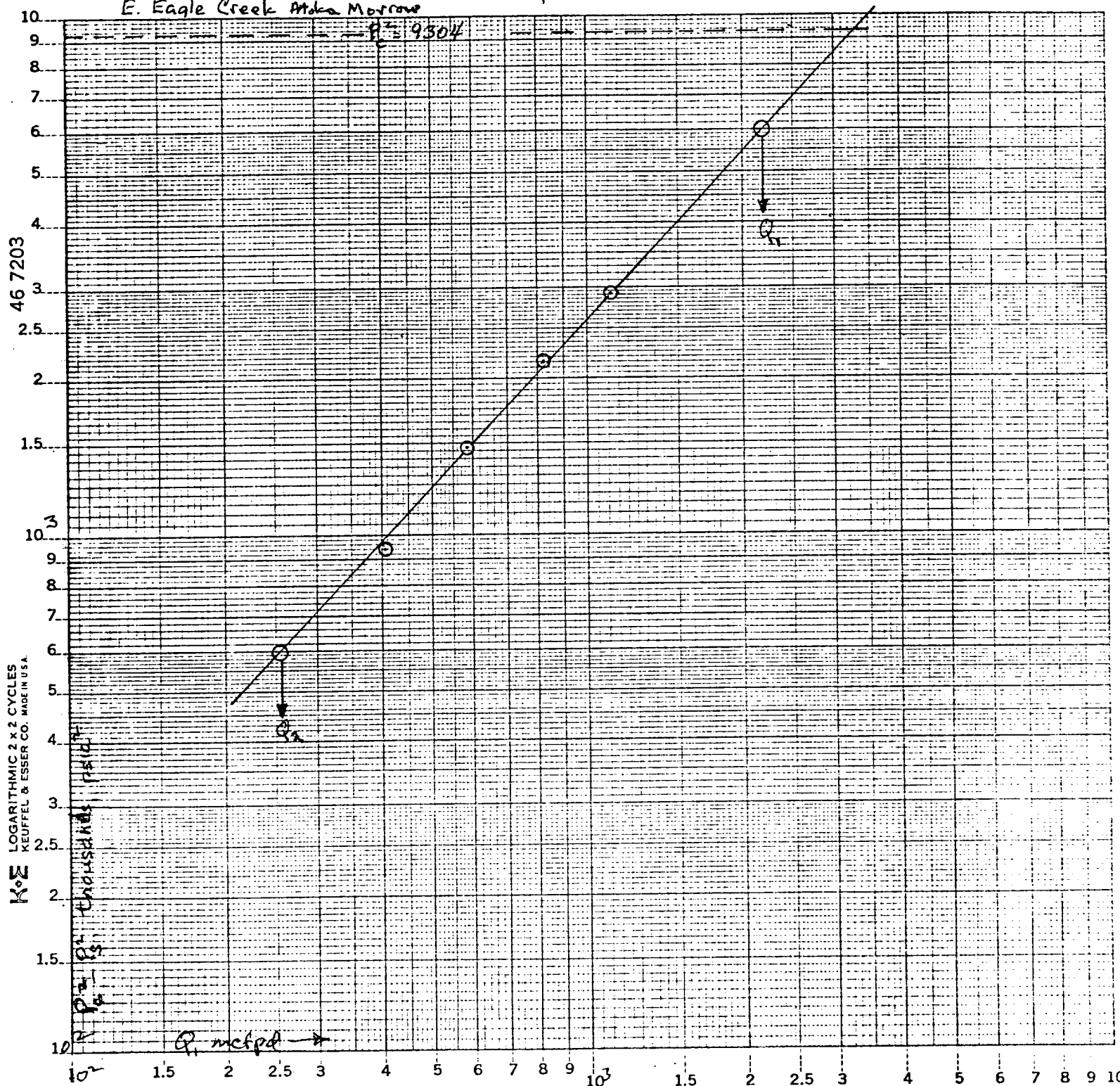
Remarks: Static pressures by Bennett Wireline; flowing pressures by DWT.
Calculations worksheet C-122D attached.

Approved By Commission:	Conducted By: Don Weaver	Calculated By: Eddie Mahfood	Checked By:
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YPC - Jackson AT Cam No. 9, M. 13-175-25E, Eddy Co. O. C. C.
E. Eagle Creek Artesia Morrow ARTESIA, OFFICE



$$Q_1 = 2180 \text{ mcfpd} \quad \log Q_1 = 3.33846$$

$$Q_2 = 256 \text{ mcfpd} \quad \log Q_2 = 2.40824$$

$$n = 0.93022$$

WORKSHEET FOR CALCULATION OF SURFACE COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Amplified 9-1-65

COMPANY

YPC

LEASE

Jackson AT Com

WELL NO. *9*

DATE

7/16/69

LOCATION: Unit

M

Section

13

Township

17S

Range

25E

L

7994

H

7994

L/H

1.000

G

0.605

% CO₂

0.00

% N₂

0.00

% H₂S

2 1/8"

7955 (5.158) 47395

3 1/2"

39123.432 933

4"

7994 (6.045) 48328

P_{CT}

721

T_{CT}

396

TABLE IX & X

TABLE IX & X

TABLE IX & X

D

2.4588

F₁

0.001683

GH

5316

* (3.1416 x D² / 4) x L

0.0001683

0.0001683

0.0001683

0.0001683

0.0001683

LINE

51

1

7

3

4

1 Q_m

-

0.405

0.5814

0.820

1.108

2 F_w (W.H. °R)

5.5

5.5

5.5

5.5

5.5

3 T_s (B.H. °R)

5.09

5.98

5.97

5.97

5.96

4 T = (L_w + T_s)

5.741

5.745

5.945

5.95

5.55

5 Z (Est.)

.747

.7405

.7395

.741

.744

6 T_Z

42550

425.42

424.84

426.08

428.17

7 GH/T_Z

12.4493

12.496

12.513

12.477

12.416

8 e^s (Table XIV)

1.5976

1.5978

1.5985

1.5966

1.5929

9 1-e^s (Table XIV)

0.3741

0.3741

0.3745

0.3737

0.3722

10 P₁

2.413.2

2301.2

2213.2

2115.2

2017.2

11 P₁ 2/1000

5823.5

5295.5

4898.25

4474.1

4004.8

12 F₁ (Table XV)

0.46851

0.46860

0.46925

0.46788

0.46588

13 F₁ C = F₁ T_Z

4.1215

4.1158

4.11279

4.1481

14 F₁ C Q_m

1.6692

2.4036

3.385

4.572

4.572

15 L/H (F₁ C Q_m)²

2.986

5.797

11.46

21.12

21.12

16 F_w = L/H (F₁ C Q_m)² (1-e^s)

1.0

2.16

4.3

7.9

7.9

17 P_w² = P₁² 2 + F_w

5296.5

4900.41

4478.4

4012.7

4012.7

18 P_s² = e^s P_w²

9304

8462.7

7834.8

7150.2

6391.8

19 P_s

3050.2

2909.1

2791.1

2673.9

2525.2

20 P = (P₁² + P_s²)

9721.7

2605.1

2506.1

2394.6

2264.7

21 P₁ = (P/P_{CT})

3.939

3.613

3.426

3.381

3.141

22 T₁ = (T/T_{CT})

1.450

1.451

1.415

1.415

1.115

23 Z (Table XI)

0.742

0.7405

0.7395

0.741

0.744

RECEIVED

SEP 19 1969

D.C.B. ARTSIA, OFFICE