

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 9-18-72		ARTESIAL OFFICE	
Company Yates Drlg. Company				Connection NONE			
Pool Undesignated				Formation Queen Gas		Unit -	
Completion Date 6-1-72		Total Depth 2822'		Plug Back TD 2783'		Elevation 4112' GL	
Farm or Lease Name Federal AA				Well No. 1			
Csg. Size 4 1/2"	Wt. 10.5	d 4.052	Set At 2783'	Perforations: From 2638' To 2650'		Unit H	
Thg. Size 2"	Wt. 4.6	d 1.995	Set At 2606'	Perforations: From OPEN To ENDED		Sec. 4 Twp. 13s Rge. 31e	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 2606'		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 76° @ 2644'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
State New Mexico							
L 2644'	H -	G _g 0.939	% CO ₂ 0.00	% N ₂ 86.36	% H ₂ S 0.00	Prover X	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. DWT	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							765		PACKER		24 days
1.	2	1/2	521	-	74	518	74	-	-	-	1.0 Hrs
2.	2	1/2	452	-	70	575	70	-	-	-	1.0
3.	2	1/2	316	-	64	652	64	-	-	-	1.0
4.	2	1/2	156	-	56	712	56	-	-	-	1.0
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	4.279	-	534.2	0.9868	1.032	1.054	2453.5
2	4.279	-	465.2	0.9905	1.032	1.048	2132.5
3	4.279	-	329.2	0.9962	1.032	1.036	1500.2
4	4.279	-	169.2	1.004	1.032	1.019	764.4
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	0.89	535	1.45	0.900	Dry Gas	
2.	0.78	530	1.44	0.910		
3.	0.55	524	1.42	0.932		
4.	0.28	516	1.40	0.964		
5.						

A.P.I. Gravity of Liquid Hydrocarbons				Specific Gravity Separator Gas				Specific Gravity Flowing Fluid				Critical Pressure				Critical Temperature			
-				0.939				X X X X X				600				369			
												P.S.I.A.				R			

P _c 876.2	P _c ² 767.7	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.336$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^{0.886} = 4351$
NO.	P _w ²	P _w ² ×	P _w ² × P _c ² - P _w ²
1	-	610.2	372.3
2	-	654.2	427.9
3	-	733.2	537.6
4	-	813.2	661.3
5			

Absolute Open Flow 4350 Mcfd @ 15.025		Angle of Slope θ 48° 27'		Slope, n 0.886	
Remarks: * BHP @ (+1468') 2644' used for pressure calculations					

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
<i>[Signature]</i>	COLEMAN PET. ENG. CO.	JOE A. COLEMAN	JOE A. COLEMAN

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U 072

OIL CONSERVATION COMM.
HOLLIS H. M.

COMPANY YATES DRLG. COMPANY
 WELL FEDERALL, NO.1
 LOCATION Unit H, Sec. 4 13s 31e
 COUNTY CHAVES, NEW MEXICO
 DATE SEPTEMBER 18, 1972

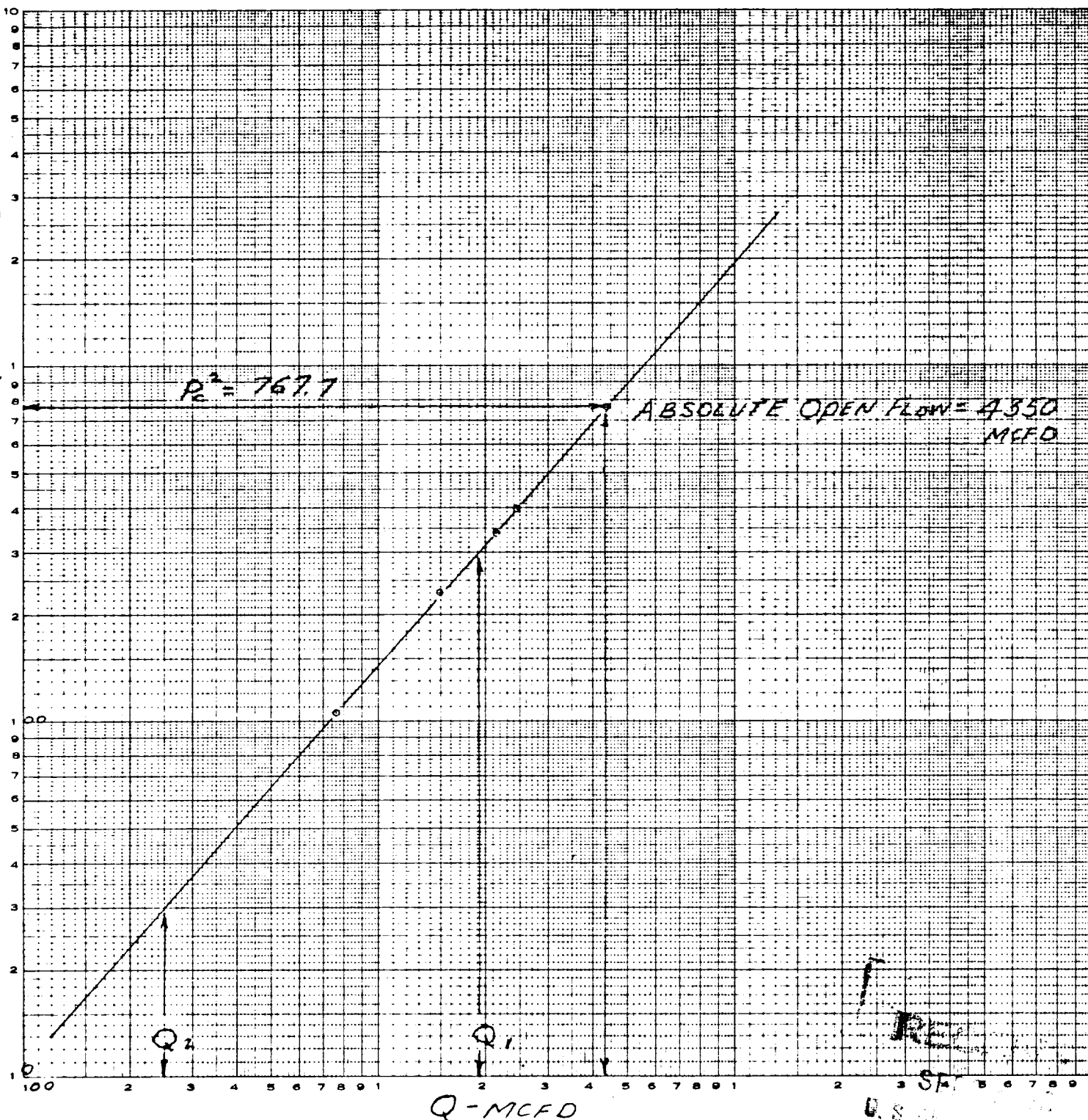
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 ARTESIA. OFFICE

EUGENE DIETZGEN CO.
 MADE IN U.S.A.
 $P_c^2 - P_w^2$ (THOUSANDS)

NO. 340R-L33 DIETZGEN GRAPH PAPER
 LOGARITHMIC
 3 CYCLES X 3 CYCLES



$Q_1 = 1925 \text{ MCFD}; \text{LOG } Q_1 = 3.28443$

$Q_2 = 250 \text{ MCFD}; \text{LOG } Q_2 = 2.39794$

$n = 0.88649 = 0.886$

U.S. DEPT. OF THE INTERIOR
 ARTESIA



COLEMAN PETROLEUM ENGINEERING COMPANY

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PHONE 393-3813

3713 W. MARLAND ST.

P. O. BOX 1829

HOBBS, NEW MEXICO 88240

S. C. C.
ARTS & CRAFTS

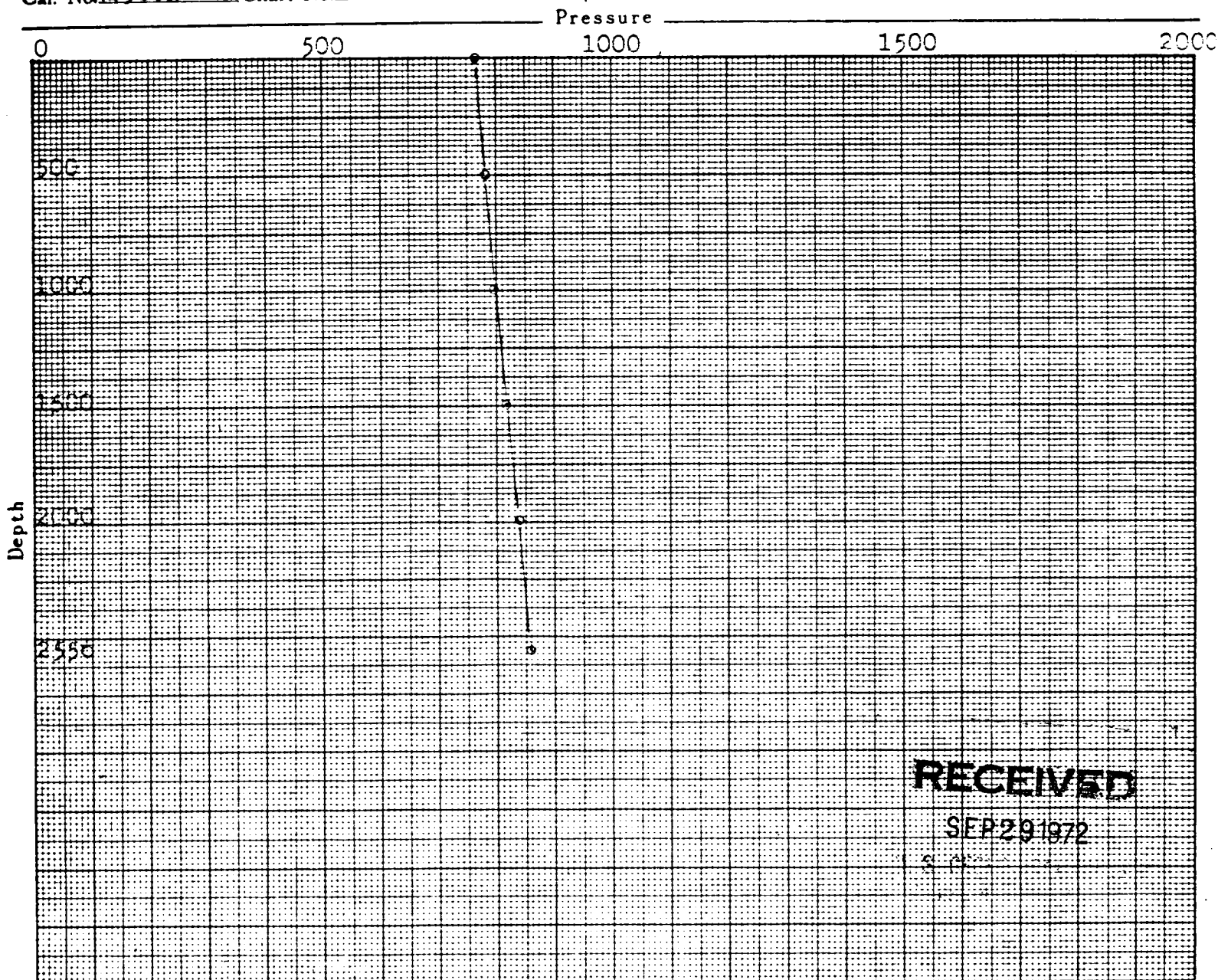
BOTTOM HOLE PRESSURE RECORD

OPERATOR Yates Drlg. Company
FIELD Undesignated FORMATION Queen Gas
LEASE Federal AA WEL No. 1
COUNTY Chaves STATE New Mexico
DATE 9-18-72 TIME 11:00 Am
Status Shut In Test depth 2556'
Time S. I. 24 days Last test date Initial
Tub Pres. 765 BHP last test -
Cas. Pres. PKR BHP change -
Elev. 4112' GL Fluid top -
Datum (+1468') ** Water top -
Temp. @ 76°F Run by Weaver
Cal. No. 4586N Chart No. 1

Depth	Pressure	Gradient
0	765	-
500	781	.032
1000	799	.036
1500	817	.036
2000	837	.040
2556	859	.040
2644(+1468)	863* **	(.040)

* Extrapolated pressure

** Mid point of casing perforations





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ARTESIA, OFFICE

BOTTOM HOLE PRESSURE RECORD

OPERATOR Yates Drlg. Company
FIELD Undesignated FORMATION Queen Gas
LEASE Federal AA WELL No. 1
COUNTY Chaves STATE New Mexico
DATE 9-18-72 TIME 5:30 Pm
Status Flowing On Test depth 2556'
~~Flowing On~~ 1 1/2" Ch Last test date -
Tub Pres. 715 BHP last test -
Cas. Pres. PKR BHP change -
Elev. 4112' GL Fluid top -
Datum (+1468') ** Water top -
Temp. @ 76°F Run by Weaver
Cal. No. A4586N Chart No. 2

Depth	Pressure	Gradient
0	715	-
500	731	.032
1000	750	.038
1500	764	.028
2000	779	.030
2556	797	.032
2644(+1468)	800* **	(.032)

* Extrapolated pressure

** Mid point of casing perforations

