

CISF



OIL CONSERVATION DIVISION

1220 S. St. Francis Dr.
Santa Fe, NM 87503 87504

WELL DELIVERABILITY TEST REPORT FOR

2001

POOL NAME McMillian Morrow	WELL NAME AND NUMBER Morrow	COUNTY Eddy
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OPERATOR Pogo Producing Co.		WELL NAME AND NUMBER Davis "18" #1	
UNIT LETTER D	SECTION 18	TOWNSHIP 20S	RANGE 27E
PURCHASING PIPELINE GPM Gas Corp.			
CASING O.D. - INCHES 5 1/2"	CASING I.D. - INCHES	SET AT DEPTH - FEET 10,550	TUBING O.D. - INCHES 2 7/8"
TUBING I.D. - INCHES		TOP - TUBING PERP. - FEET 10,171'	
GAS PAY ZONE FROM 10296' TO 10326'		WELL PRODUCING THRU CASING TUBING X	
DATE OF FLOW TEST FROM 1-4-01 TO 1-07-01		GAS GRAVITY 0.600	
DATE SHUT-IN PRESSURE MEASURED 1-03-01		GRAVITY X LENGTH	

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWt)	(b) Flowing Tubing Pressure (DWt)	(c) Flowing Meter Pressure (DWt)	(d) Flow Chart Static Reading	(e) Meter Error (Item c - Item d)	(f) Friction Loss (a - c) or (b - c)	(g) Average Meter Pressure (Integr.)
0	540	445	26	419	95	2563
(h) Corrected Meter Pressure (g + e)	(i) Avg. Wellhead Press. $P_i = (h + f)$	(j) Shut-in Casing Pressure (DWt)	(k) Shut-in Tubing Pressure (DWt)	(l) $P_c =$ higher value of (j) or (k)	(m) Del. Pressure $P_d = \frac{77}{100} P_c$	(n) Separator or Dehydrator Pr. (DWt) for critical flow only
2982	3076	0	2373	2373		

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D	Quotient of $\frac{\text{Item c}}{\text{Item d}}$	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$	Corrected Volume Q = 1161 MCF/D
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WORKING PRESSURE CALCULATION

$(1 - e^{-R})$	$(F_c Q_m)^2 (1000)$	$R^2 = (1 - e^{-R}) (F_c Q_m)^2 (1000)$	P_i^2	$P_w^2 = P_i^2 + R^2$	$P_w = \sqrt{P_w^2}$
	343.3025		9466.122	9809	3132 (measured)

DELIVERABILITY CALCULATION

$$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = 1161 \left[\left(\frac{9809.424}{8122.023} \right)^n (1.2078)^n \right] = 1.2078 = 1402 \text{ MCF/D}$$

REMARKS:

SUMMARY

Item h _____ Psia
 P_c 3132 _____ Psia
 Q 1161 _____ MCF/D
 P_w 1299 _____ Psia
 P_d 0 _____ Psia
 D 1402 _____ MCF/D

Company Pogo Producing Co.

By

Title Regulatory Agent

Witnessed By

Richard Wright

Company Pogo Producing Co.