

POOL NAME Artec	POOL SLOPE n = .85	FORMATION Pictured Cliffs	COUNTY San Juan
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87-011

COMPANY El Paso Natural Gas Company		WELL NAME AND NUMBER Michner No. 5			
UNIT LETTER I	SECTION 15	TOWNSHIP 28	RANGE 9	PURCHASING PIPELINE El Paso Natural Gas	
CASING O.D. - INCHES 2.875	CASING I.D. - INCHES 2.441	SET AT DEPTH - FEET 2350	TUBING O.D. - INCHES No tubing	TUBING I.D. - INCHES	TOP - TUBING PERF. - FEET
GAS PAY ZONE		WELL PRODUCING THRU		GAS GRAVITY .651	GRAVITY X LENGTH 1467
FROM 2253	TO 2275	CASING XX	TUBING	DATE SHUT-IN PRESSURE MEASURED	
DATE OF FLOW TEST FROM 7-23-69 TO 7-31-69		DATE SHUT-IN PRESSURE MEASURED 5-8-69			

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	0	221
(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 _f = higher value of (i) or (k)	(m) Del. Pressure P _d = $\frac{80}{564} P_c$	(n) Separator or Dehydrator Pr. (DWt) for critical flow only
221	221	705	-	705		

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D 240	Quotient of $\frac{\text{Item c}}{\text{Item d}}$ 1.0000	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$ 1.0000	Corrected Volume Q = 240 MCF/D
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WORKING PRESSURE CALCULATION

$(1-e^{-5})$ Friction Neg.	$(F_c Q_m)^2 (1000)$	$R^2 = (1-e^{-5}) (F_c Q_m)^2 (1000)$	P_t^2	$P_w^2 = P_t^2 + R^2$ Use P_t^2	$P_w = \sqrt{P_w^2}$ 221
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DELIVERABILITY CALCULATION

$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n =$	240	$\left[\frac{178929}{448184} \right]^n =$	$(0.3992)^n =$	0.4582	$= 110 \text{ MCF/D}$
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REMARKS: New well 1st. del. June 13, 1969

SUMMARY

Item h 221 Psia
P_c 705 Psia
Q 240 MCF/D
P_w 221 Psia
P_d 564 Psia
D 110 MCF/D

Company EL PASO NATURAL GAS COMPANY
By H. E. McAnoldy H. E. McAnoldy
Title Well Test Engineer
Witnessed By
Company

