Initial Deliverability Test

NEW MEXICO OIL CONSERVATION COMMISSION

WELL DELIVERABILITY TEST REPORT FOR 1968

Form C122-A
Revised 1-1-68

POOL NAME	POOL SLOPE	FORMATION	COUNTY
Aztec	n = .85	Pictured Cliffs	San Juan

COMPANY			WELL NAME AND NUMBER		
El Paso Natural Gas Company			Hartman No. 1 (OWWO)		
UNIT LETTER	SECTION	TOWNSHIP	RANGE	PURCHASING PIPELINE	
D	26	30-N	11-W	El Paso Natural Gas Company	
CASING O.D. - INCHES	CASING I.D. - INCHES	SET AT DEPTH - FEET	TUBING O.D. - INCHES	TUBING I.D. - INCHES	TOP - TUBING PERF. - FEET
2.875	2.441	2366	No Tubing		
GAS PAY ZONE		WELL PRODUCING THRU	GAS GRAVITY	GRAVITY X LENGTH	
FROM 2316 TO 2340		CASING X TUBING	.644	1492	
DATE OF FLOW TEST			DATE SHUT-IN PRESSURE MEASURED		
FROM 9-18-68 TO 9-26-68			8-15-68		

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.)
						221
(h) Corrected Meter Pressure (g+e)	**(i) Avg. Wellhead Press. P_t = (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**	**(n) Separator or Dehydrator Pr. (DWt) for critical flow only**
221	221	451	---	451	80 P_d = 361 %P_c	

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
62	1.0000	1.0000	C = 62 MCF/D

WORKING PRESSURE CALCULATION

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

DELIVERABILITY CALCULATION

$$D = Q\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2}\right]^n = 62 \left[\frac{73080}{154560}\right]^n = (.4728)^n = .5290 = .5292 = 33 \text{ MCF/D}$$

REMARKS: First Delivered after OWWO 8-22-68.

SUMMARY

Item h	221	Psia
P_c	451	Psia
Q	62	MCF/D
P_w	221	Psia
P_d	361	Psia
D	33	MCF/D

Company EL PASO NATURAL GAS COMPANY
By H. L. Kendrick
Title Regional Well Test Engineer
Witnessed By
Company

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OIL CON. COM.
DIST. 3