

Initial
Deliverability Test

NEW MEXICO OIL CONSERVATION COMMISSION
WELL DELIVERABILITY TEST REPORT FOR 19 69

Form C122-A
Revised 1-1-68

POOL NAME BLANCO	POOL SLOPE n = .35	FORMATION NV	COUNTY SJ
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COMPANY EL PASO NATURAL GAS CO.			WELL NAME AND NUMBER HARDIE A #1		
UNIT LETTER N	SECTION 26	TOWNSHIP 29	RANGE 8	PURCHASING PIPELINE EL PASO NATURAL GAS CO.	
CASING O.D. INCHES 4.500	CASING I.D. INCHES 4.052	SET AT DEPTH FEET 6552	TUBING O.D. INCHES 2.375	TUBING I.D. INCHES 1.995	TUBING PERFOR. FEET 5837
GAS PAY ZONE 5252		CASING 5464		TUBING 8.700	
DATE OF FLOW 09/08/69		DATE SHUT-IN 09/15/69		PRESSURE MEASURED 3736	
FROM 09/08/69		TO 09/15/69		DATE SHUT-IN PRESSURE MEASURED 05/29/69	

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWt) 443	(b) Flowing Tubing Pressure (DWt) 443	(c) Flowing Meter Pressure (DWt) 308	(d) Flow Chart Static Reading 613	(e) Meter Error (Item c - Item d) 708	(f) Friction Loss (a-c) or (b-c) 566	(g) Average Meter Pressure (Integr.) 443
(h) Corrected Meter Pressure (g+f) 443	(i) Avg. Wellhead Press. $P_f = (h+f)$ 443	(j) Shut-in Casing Pressure (DWt) 308	(k) Shut-in Tubing Pressure (DWt) 613	(l) P_c = higher value of (j) or (k) 708	(m) Del. Pressure $P_d = 80\% P_c$ 566	(n) Separator or Dehydrator Pr. (DWt) for critical flow only 443

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D 1052	Quotient of $\frac{\text{Item c}}{\text{Item d}}$ 1.0000	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$ 1.0000	Corrected Volume 1052 MCF/D
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WORKING PRESSURE CALCULATION

$(1-e^{-s})$.238	$(F_c Q_m)^2 (1000)$ 97.832	$R^2 = (1-e^{-s}) (F_c Q_m)^2 (1000)$ 23284	P_t^2 196249	$P_w^2 = P_t^2 + R^2$ 219533	$P_w = \sqrt{P_w^2}$ 469
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DELIVERABILITY CALCULATION

$$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \frac{1052}{\left[\frac{180988}{281731} \right]^n} = \frac{0.6421}{0.7173} = 755 \text{ MCF/D}$$

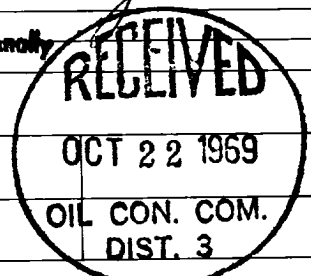
REMARKS: 1st Delivery after OWWO Aug. 12, 1969

SUMMARY

Item h **443** Psia
P_c **708** Psia
Q **1052** MCF/D
P_w **469** Psia
P_d **566** Psia
D **755** MCF/D

OK

Company **EL PASO NATURAL GAS CO.**
By **H. E. McNally**
Title **Original Signed H. E. McNally**
Witnessed By
Company

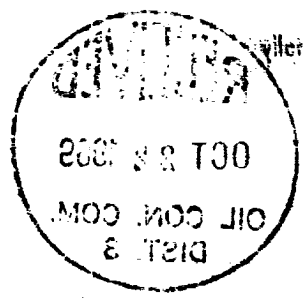


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