

NEW MEXICO OIL CONSERVATION COMMISSION
INITIAL WELL DELIVERABILITY TEST REPORT FOR 1968

Form C122-A
Revised 1-1-66

POOL NAME Basin Dakota	POOL SLOPE n = .75	FORMATION Dakota	COUNTY San Juan
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COMPANY Jerome P. McHugh		WELL NAME AND NUMBER Hardie #4	
UNIT LETTER M	SECTION 24	TOWNSHIP 29N	RANGE 8W
PURCHASING PIPELINE E.P.N.G. Co.			
CASING O.D. - INCHES 4.500	CASING I.D. - INCHES	SET AT DEPTH - FEET 7606'	TUBING O.D. - INCHES 1.660
TUBING I.D. - INCHES 1.380		TOP - TUBING PERF. - FEET 7517	
GAS PAY ZONE FROM 7336' TO 7586'		WELL PRODUCING THRU CASING TUBING X	
GAS GRAVITY .678		GRAVITY X LENGTH 5097	
DATE OF FLOW TEST FROM 3/13/68 TO 3/21/68		DATE SHUT-IN PRESSURE MEASURED 11/7/67	

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWt) 667	(b) Flowing Tubing Pressure (DWt) 505	(c) Flowing Meter Pressure (DWt) 501	(d) Flow Chart Static Reading 7.1 504	(e) Meter Error (Item c - Item d) - 3	(f) Friction Loss (a - c) or (b - c) + 4	(g) Average Meter Pressure (Integr.) 512
(h) Corrected Meter Pressure (g + e) 509	(i) Avg. Wellhead Press. $P_t = (h + f)$ 513	(j) Shut-in Casing Pressure (DWt) 2537	(k) Shut-in Tubing Pressure (DWt) 2514	(l) P_c = higher value of (j) or (k) 2537	(m) Del. Pressure $P_d = 50$ % P_c 1268	(n) Separator or Dehydrator Pr. (DWt) for critical flow only ----

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D 781	Quotient of $\frac{\text{Item c}}{\text{Item d}}$.9940	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$.9970	Corrected Volume Q = 779 MCF/D
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WORKING PRESSURE CALCULATION

$(1 - e^{-s})$.310	$(F_c Q_m)^2 (1000)$ 367,832	$R^2 = (1 - e^{-s}) (F_c Q_m)^2 (1000)$ 114,028	P_t^2 263,169	$P_w^2 = P_t^2 + R^2$ 377,197	$P_w = \sqrt{P_w^2}$ 614
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DELIVERABILITY CALCULATION

$$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = 779 \left[\frac{4,828,545}{6,059,172} \right]^{.75} = .8434 = 657 \text{ MCF/D}$$

REMARKS:

Well first delivered 2/23/68

SUMMARY

Item h	509	Psia
P _c	2537	Psia
Q	779	MCF/D
P _w	614	Psia
P _d	1268	Psia
D	657	MCF/D

J.P.M.

Company **Jerome P. McHugh**
 By **T. A. Dugan (J & J)**
 Title **Consulting Engineer**
 Witnessed By _____
 Company _____

