.national
-thern Union
-Lloyd
1-Murphy
1-File

Initial Deliverability Test

Form C-122-A
Revised April 20, 1955

NEW MEXICO OIL CONSERVATION COMMISSION

# GAS WELL TEST DATA SHEET - - SAN JUAN BASIN

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA EXCEPT BARKER DOME STORAGE AREA)

Pool Basin Formation Dakota County San Juan

Purchasing Pipeline Southern Union Date Test Filed 7-31-61

Operator International Oil Corp. Lease Martin Well No. 2-34

Unit O Sec. 34 Twp. 30N Rge. 11W Pay Zone: From 6508 To 6676

Casing: OD 4-1/2 WT. 11.6 & 9.5 Set At 6768 Tubing: OD 2-3/8 WT. 4.7 T. Perf. 6658

Produced Through: Casing ____ Tubing X Gas Gravity: Measured .700 Estimated ____

Date of Flow Test: From 6-23-61 To 6-30-61 * Date S.I.P. Measured 7-7-61

Meter Run Size 4" Orifice Size 1.375 Type Chart S.R. Type Taps Flange

## OBSERVED DATA

| | | | | |
|---|---|---|---|---|
| Flowing casing pressure (Dwt) | 605 psig + 12 = | 617 | psia | (a) |
| Flowing tubing pressure (Dwt) | 539 psig + 12 = | 551 | psia | (b) |
| Flowing meter pressure (Dwt) | 532 psig + 12 = | 544 | psia | (c) |
| Flowing meter pressure (meter reading when Dwt. measurement taken): | | | | |
| Normal chart reading | psig + 12 = | | psia | (d) |
| Square root chart reading (7.3)$^2$ x spring constant 10 | = | 533 | psia | (d) |
| Meter error (c) - (d) or (d) - (c) ± | = | + 9 | psi | (e) |
| Friction loss, Flowing column to meter: (b) - (c) Flow through tubing: (a) - (c) Flow through casing | = | + 7 | psi | (f) |
| Seven day average static meter pressure (from meter chart): | | | | |
| Normal chart average reading | psig + 12 = | | psia | (g) |
| Square root chart average reading (6.9)$^2$ x sp. const. 10 | = | 476 | psia | (g) |
| Corrected seven day avge. meter press. ($p_f$) (g) + (e) | = | 485 | psia | (h) |
| $P_t$ = (h) + (f) | = | 492 | psia | (i) |
| Wellhead casing shut-in pressure (Dwt) 1587 | psig + 12 = | 1599 | psia | (j) |
| Wellhead tubing shut-in pressure (Dwt) 1579 | psig + 12 = | 1591 | psia | (k) |
| $P_c$ = (j) or (k) whichever well flowed through | = | 1599 | psia | (l) |
| Flowing Temp. (Meter Run) 85 °F + 460 | = | 545 | °Abs | (m) |
| $P_d$ = ½ $P_c$ = ½ (l) | = | 800 | psia | (n) |

## FLOW RATE CALCULATION

$$Q = 693 \text{ (integrated)} \times \left( \frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{\sqrt{1.0206}}{\quad} = 1.0103 \right)^{*} = 700 \text{ MCF/da}$$

## DELIVERABILITY CALCULATION

$$D = Q \left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{1,916,801}{2,302,306} \right]^{n} \quad n = \frac{.85}{(.8326)\ .85} = .8555$$

$$D = 700 \times .8555 = 599 \text{ MCF/da.}$$

## SUMMARY

| | | |
|---|---|---|
| $P_c$ = | 1599 | psia |
| Q = | 700 | Mcf/day |
| $P_w$ = | 504 506 | psia |
| $P_d$ = | 800 | psia |
| D = | 599 | Mcf/day |

Company International Oil Corporation
By Original signed by T. A. Dugan
Title Engineer
Witnessed by ____
Company ____

RECEIVED
AUG 1 1961
OIL CON. COM.
DIST. 3

* This is date of completion test.
* Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

| GL | $(1-e^{-s})$ | $(F_cQ)^2$ | $\frac{(FcQ)^2 (1-e^{-s})}{R^2}$ | $Pt^2$ (Column i) | $P_t^2 + R^2$ | $P_w$ |
|---|---|---|---|---|---|---|
| 4661 | .287 | 43.315 | 12.431 | 242.064 | 254.495 | 504 |

OK