

15-181-20256-00-00
STATE OF KANSAS - CORPORATION COMMISSION

FORM G-2
 8-7-58

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

TYPE TEST: Deliverability Open Flow **TEST DATE:** Flow Test 6-2-87

COMPANY: GOODLAND GAS COMPANY **LEASE:** City of Goodland **WELL NO.:** 1-8

COUNTY: Sherman **LOCATION:** NW 1/4, NW 1/4 **SECTION:** 8 **TWP:** 8S **RNG:** 39W **ACRES:**

FIELD: Goodland **RESERVOIR:** Niobrara **PIPELINE CONNECTION:** KNEnergy

COMPLETION DATE: 10-12-83 **PLUG BACK TOTAL DEPTH:** 1,211 **PACKER SET AT:** None

CASINO SIZE: 4 1/2" **WT.:** **I.D.:** **SET AT:** 1,246 **PERF.:** 1.070 **TO:** 1,102

TUBING SIZE: None **WT.:** **I.D.:** **SET AT:** **PERF.:** **TO:**

TYPE COMPLETION (Describe): Frac 100,000# SD, 934 Bbl H₂O **TYPE FLUID PRODUCTION:** Gas

PRODUCING THRU: Casing **RESERVOIR TEMPERATURE F:** **BAR. PRESS - P_a:** 14.4 Psia

GAS GRAVITY - G_g: 0.5827 **% CARBON DIOXIDE:** 1.28 **% NITROGEN:** 2.635 **API GRAVITY OF LIQUID:** --

VERTICAL DEPTH (H): **TYPE METER CONN.:** Orifice-Flange **(METER RUN)(PROVER) SIZE:** 2.067

SHUT-IN PRESSURE: SHUT IN: 5-29 19 87 AT 12:52 (AM)(PM) TAKEN 6-1 19 87 AT 10:35 (AM)(PM)
 6-1 19 87 AT 10:37 (AM)(PM) TAKEN 6-2 19 87 AT 10:18 (AM)(PM)

FLOW TEST: STARTED: 6-1 19 87 AT 10:37 (AM)(PM) TAKEN 6-2 19 87 AT 10:18 (AM)(PM)

OBSERVED DATA

DURATION OF SHUT-IN: 72 HR.

| SHUT-IN OR FLOW | ORIFICE SIZE in. | (METER) (PROVER) PRESSURE psig | DIFF. in. (h _w)(h _d) | FLOWING TEMP. t | WELL-HEAD TEMP. t | CASINO WELLHEAD PRESS. | | TUBING WELLHEAD PRESS. | | DURATION HOURS | LIQUID PROD. Bbls. |
|-----------------|------------------|--------------------------------|--|-----------------|-------------------|------------------------|--|------------------------|--|----------------|--------------------|
| | | | | | | psig | (P _w)(P _t)(P _c) psia | psig | (P _w)(P _t)(P _c) psia | | |
| SHUT-IN | -- | -- | -- | -- | -- | 28.7 | 43.1 | -- | -- | 72 | -- |
| FLOW | 0.50 | 15.3 | 5.5 | 60 | -- | 15.6 | 30.0 | -- | -- | 24 | -- |

RATE OF FLOW CALCULATIONS

| COEFFICIENT (F _b)(F _d) Mcfd | (METER) (PROVER) PRESSURE psia | EXTENSION $\sqrt{P_m h_w}$ | GRAVITY FACTOR F _g | FLOWING TEMP. FACTOR F _t | DEVIATION FACTOR F _{pv} | RATE OF FLOW R Mcfd | GOR | G _m |
|---|--------------------------------|----------------------------|-------------------------------|-------------------------------------|----------------------------------|---------------------|-----|----------------|
| 50.5 | 29.70 | 12.78 | 1.31 | 1.0 | 1.0005 | 20 | -- | -- |

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 1857.61 ; (P_w)² = 900.00 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_c)² = 0.207 ; (P_d)² = _____

| $\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$ | $(P_c)^2 - (P_w)^2$ | $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]$ | LOG [] | "n" | n x LOG [] | ANTILOG | OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd |
|---|---------------------|--|---------|-------|-------------|---------|--|
| 1650.25 | 957.61 | 1.72 | 0.24 | 0.822 | 0.19 | 1.56 | 31 |

OPEN FLOW 30 Mcfd @ 14.65 psia **DELIVERABILITY** Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Executed this the 4 day of June, 1987.

Charles D. Larling
 CONSERVATION DIVISION
 Wichita, Kansas

Witness (if any)

For Commission

Checked by