

15-181-20245-00-00

FORM G-2
8-7-88

89
6-1887

STATE OF KANSAS - CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

TYPE TEST: Deliverability Open Flow TEST DATE: 4-25 to 5-1-87

COMPANY: Goodland Gas Company LEASE: Wieck WELL NO.: 1-35

COUNTY: Sherman LOCATION: SE 1/4, SE 1/4, NE 1/4 SECTION: 35 TWP: 7S RNG: 39W ACRES:

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KN Energy

COMPLETION DATE: 4-4-83 PLUG BACK TOTAL DEPTH: 1079' PACKER SET AT: None

CASING SIZE: 4 1/2" WT. 9.5#/ft. LD. SET AT 1111' PERF. 1060' TO 1070'

TUBING SIZE: None WT. LD. SET AT PERF. TO

TYPE COMPLETION (Describe): Frac 100,700# Sd., .918 Bbls H₂O TYPE FLUID PRODUCTION: Gas

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

GAS GRAVITY - G_g: 0.5827 % CARBON DIOXIDE: 1.280 % NITROGEN: 2.635 API GRAVITY OF LIQUID: --

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

SHUT-IN PRESSURE: SHUT IN 4-25 19 87 AT 10:28 (AM)(PM) TAKEN 4-28 19 87 AT 10:45 (AM)(PM)

FLOW TEST: STARTED 4-28 19 87 AT 10:50 (AM)(PM) TAKEN 5-1 19 87 AT 10:48 (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	CASING 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	--	--	--	--	--	49.4	63.8	--	--	72	--
FLOW	0.625	39.7	1-06	60	--	39.9	54.3	--	--	72	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _p)(P _d) ² Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
79.3	54.1	7.57	1.31	1.00	1.0025	19	--	--

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 4070.44, (P_w)² = 2948.49, P_d = _____ % (P_c - 14.4) + 14.4 = _____, (P_w)² = 0.207, (P_d)² = _____

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
3863.08	1121.95	3.443	0.537	0.7332	0.3937	2.4757	

OPEN FLOW 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 15 day of May, 1987

David D. Swartz
For Company

Witness (if any)

Checked by

RECEIVED
STATE CORPORATION COMMISSION

CONSERVATION DIVISION
Oklahoma, Kansas

STATE OF KANSAS - CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM O-2
8-7-58

Pg
6-457

TYPE TEST: Deliverability Open Flow TEST DATE:

COMPANY _____ LEASE Wick WELL NO. 1-35

COUNTY _____ LOCATION _____ SECTION _____ TWP _____ RNO _____ ACRES _____

FIELD _____ RESERVOIR _____ PIPELINE CONNECTION _____

COMPLETION DATE _____ PLUG BACK TOTAL DEPTH _____ PACKER SET AT _____

CASINO SIZE WT. I.D. SET AT PERF. TO

TUBINO SIZE WT. I.D. SET AT PERF. TO

TYPE COMPLETION (Describe) _____ TYPE FLUID PRODUCTION _____

PRODUCING THRU _____ RESERVOIR TEMPERATURE F BAR. PRESS - P_a
14.4 Psia

GAS GRAVITY - G_g 5827 % CARBON DIOXIDE _____ % NITROGEN _____ API GRAVITY OF LIQUID _____

VERTICAL DEPTH (H) _____ TYPE METER CONN. F (METER RUN) (PROVER) SIZE 2

SHUT-IN PRESSURE: SHUT IN _____ 19 AT _____ (AM)(PM) TAKEN _____ 19 AT _____ (AM)(PM)
 FLOW TEST: STARTED _____ 19 AT _____ (AM)(PM) TAKEN _____ 19 AT _____ (AM)(PM)

OBSERVED DATA DURATION OF SHUT-IN _____ 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 _i)(P _c) psia	psig	(P _w)(P _i)(P _c) psia		
SHUT-IN						49.4	63.8				
FLOW	.625	39.7	1.06	60		39.9	54.3				

RATE OF FLOW CALCULATIONS

COEFFICIENT $\frac{(P_c)^2 - (P_w)^2}{Mcd}$	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m z h_w}$	GRAVITY FACTOR F_g	FLOWING TEMP. FACTOR F_L	DEVIATION FACTOR F_{pv}	RATE OF FLOW R Mcd	GOR	Q_m
1.914	54.1	7.57	1.31	1.0	1.011	19.19		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2 = 4070.44$ $(P_w)^2 = 2948.49$ $P_d^2 =$ _____ % $(P_c - 14.4) + 14.4 =$ _____ $(P_w)^2 = 0.207$ $(P_d)^2 =$ _____

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS $R \times$ ANTILOG Mcd
3863.08	1121.95	3.443	.5369	.7332	.3937	2.475	47.49

OPEN FLOW 47 Mcd @ 14.65 psia DELIVERABILITY

RECEIVED
STATE CORPORATION COMMISSION
Mcd @ 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 _____ day of _____, 19____.

Witness (if any)
Dale F. Balthazar
For Commission

For Company _____
Checked by _____

CONSERVATION DIVISION
Wichita, Kansas