15-181-20258-00-00

STATE OF KANSAS – CORPORATION COMMISSION

FORM C-5
8-7-58

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

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

COMPANY	LEASE	WELL NO.
Goodland Gas Company	Weary	1-16

COUNTY	LOCATION	SECTION	TWP	RNG	ACRES
Sherman	NW¼, SW¼	16	8S	39W	

FIELD	RESERVOIR	PIPELINE CONNECTION
Goodland	Niobrara	KN Energy

COMPLETION DATE	PLUG BACK TOTAL DEPTH	PACKER SET AT
10-12-83	1062'	None

CASING SIZE	WT.	I.D.	SET AT	PERF.	TO
4½"	9.5#/ft.		1133'	986'	1002'

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

TYPE COMPLETION (Describe)	TYPE FLUID PRODUCTION
Frac 100,000# Sd, 950 Bbls H_2O	Gas

PRODUCING THRU	RESERVOIR TEMPERATURE F	BAR. PRESS – P_a
Casing		14.4 Psia

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

VERTICAL DEPTH (H)	TYPE METER CONN.	(METER RUN)(PROVER) SIZE
	Orifice - flange	2.067

SHUT-IN PRESSURE: SHUT IN 4-25 19 87 AT 9:30 (AM)(PM) TAKEN 4-28 19 87 AT 8:56 (AM)(PM)

FLOW TEST: STARTED 4-28 19 87 AT 9:00 (AM)(PM) TAKEN 5-1 19 87 AT 9:10 (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. psig	CASING WELLHEAD PRESS. $(P_w)(P_t)(P_c)$ psia	TUBING WELLHEAD PRESS. psig	TUBING WELLHEAD PRESS. $(P_w)(P_t)(P_c)$ psia	DURATION HOURS	LIQUID PROD. Bbls.
SHUT-IN	--	--	--	--	--	19.0	33.4	--	--	72	--
FLOW	0.375	15.3	4.7	60	--	15.5	29.9	--	--	72	--

RATE OF FLOW CALCULATIONS

COEFFICIENT $(F_b)(F_p)$ Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m x h_w}$	GRAVITY FACTOR F_g	FLOWING TEMP. FACTOR F_t	DEVIATION FACTOR F_{pv}	RATE OF FLOW R Mcfd	GOR	O_m
28.4	29.7	11.81	1.31	1.00	1.0010	11	--	--

RECEIVED
STATE CORPORATION COMMISSION
6-1-87
CONSERVATION DIVISION
Wichita, Kansas

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2$= 1115.56 ; $(P_w)^2$= 894.01 ; P_d= ____ % ; $(P_c - 14.4) + 14.4$ = ____ ; $(P_d)^2$= ____

$(P_w)^2$=0.207

$(P_c)^2-(P_a)^2$ or $(P_c)^2-(P_d)^2$	$(P_c)^2-(P_w)^2$	$\left[\frac{P_c^2-P_a^2}{P_c^2-P_d^2}\right]$ / $\left[\frac{P_c^2-P_d^2}{P_c^2-P_w^2}\right]$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
908.20	221.55	4.10	0.61	0.8506	0.52	3.32	37

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

Witness (if any)

For Company

Checked by

STATE OF KANSAS — CORPORATION COMMISSION

FORM C-2
8-7-58

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

TYPE TEST: ☐ Deliverability ☐ Open Flow TEST DATE:

COMPANY | LEASE: Weary | WELL NO.: 1-16

COUNTY | LOCATION | SECTION | TWP | RNG | ACRES

FIELD | RESERVOIR | PIPELINE CONNECTION

COMPLETION DATE | PLUG BACK TOTAL DEPTH | PACKER SET AT

CASING SIZE | WT. | I.D. | SET AT | PERF. | TO

TUBING 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	CASING WELLHEAD PRESS. psig	CASING WELLHEAD PRESS. $(P_w)(P_t)(P_c)$ psia	TUBING WELLHEAD PRESS. psig	TUBING WELLHEAD PRESS. $(P_w)(P_t)(P_c)$ psia	DURATION HOURS	LIQUID PROD. Bbls.
SHUT-IN						19.0	33.4				
FLOW	.375	15.3	4.7	60		15.5	29.9				

RATE OF FLOW CALCULATIONS

COEFFICIENT $(F_b)(F_p)$ Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m x h_w}$	GRAVITY FACTOR F_g	FLOWING TEMP. FACTOR F_t	DEVIATION FACTOR F_{pv}	RATE OF FLOW R Mcfd	GOR	Q_m
.6860	29.7	11.81	1.31	1.0	1.011	10.73		

RECEIVED
STATE CORPORATION COMMISSION
JUL

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

CONSERVATION DIVISION
Wichita, Kansas

$(P_c)^2$ = 1115.56 | $(P_w)^2$ = 894.01 | P_d = _____ % | $(P_c - 14.4) + 14.4$ = _____ | $(P_a)^2 = 0.207$ | $(P_d)^2$ = _____

$(P_c)^2-(P_a)^2$ or $(P_c)^2-(P_d)^2$	$(P_c)^2-(P_w)^2$	$\frac{P_c^2-P_a^2}{P_c^2-P_d^2}$ or $\frac{P_c^2-P_w^2}{P_c^2-P_w^2}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
908.20	221.55	4.099	.6127	.8506	.5212	3.321	35.63

OPEN FLOW 36 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 _____ day of _____, 19___.

Witness (if any)

Dale A Baethazor
For Commission

For Company

Checked by