

15-181-20267-00-00

FORM G-2
8-7-58
P. 2
6-9-87

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

TEST: Deliverability Open Flow TEST DATE: FLOW TEST 5-27-87

COMPANY: GOODLAND GAS COMPANY LEASE: Armstrong WELL NO.: 1-11A

COUNTY: Sherman LOCATION: SW 1/4, SW 1/4, NW 1/4 SECTION: 11 TWP: 8S RNG: 40W ACRES:

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KN Energy

COMPLETION DATE: 11-15-83 PLUG BACK TOTAL DEPTH: 1245 PACKER SET AT: None

CASINO SIZE: 4 1/2" WT.: 9.5#/ft I.D.: SET AT: 1341 PERF.: 1212 TO: 1237

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

TYPE COMPLETION (Describe): TYPE FLUID PRODUCTION: Gas
Frac 82,600# Sd., 40 tons CO2, 628 Bbls H2O

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

GAS GRAVITY - Gg: 0.5827 % CARBON DIOXIDE: 1.280 % 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 5-15 19 87 AT 10:18 (AM)(P) TAKEN 5-18 19 87 AT 10:25 (AM)(P) TAKEN

FLOW TEST: STARTED 5-26 19 87 AT 10:37 (AM)(P) TAKEN 5-27 19 87 AT 10:15 (AM)(P) TAKEN

OBSERVED DATA DURATION OF SHUT-IN 72 HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. In. (hw)(hd)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASINO WELLHEAD PRESS.		TUBING WELLHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(Pw)(Pc) psia	psig	(Pw)(Pc) psia		
SHUT-IN	--	--	--	--	--	25.5	39.90	--	--	72	--
FLOW	0.50	23.9	6.5	60	--	24.2	38.60	--	--	24	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (Pa)(Pc) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION sqrt(Pm*hw)	GRAVITY FACTOR Fg	FLOWING TEMP. FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW R Mcfd	GOR	Gm
50.5	38.30	15.78	1.31	1.00	1.0008	25	--	--

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(Pc)² = 1592.01, (Pw)² = 1489.96, Pd = _____ % (Pc - 14.4) + 14.4 = _____ (Pd)² = 0.207

(Pc)² - (Pa)² or (Pc)² - (Pd)²	(Pc)² - (Pw)²	[Pc² - Pa²] / [Pc² - Pd²] or [Pc² - Pa²] / [Pc² - Pw²]	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
1384.65	102.05	13.57	1.13	0.85	0.96	9.18	229

OPEN FLOW 225 Mcfd @ 14.65 psia DELIVERABILITY STATE CORPORATION COMMISSION

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 29 day of May, 1987.

RECEIVED JUN 9 1987 6-9-87 CONSERVATION DIVISION WICHITA, KANSAS [Signature]

Witness (if any)

Checked by