

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

TYPE TEST: Deliverability Open Flow TEST DATE: 2/16/86

COMPANY: Billy Oil, Inc. LEASE: John Fitzgerald WELL NO.: 1

COUNTY: Leavenworth LOCATION: SW SW NW SECTION: 31 TWP: 8 RNG: 22E ACRES: N/A

FIELD: Possum Hollow, NE RESERVOIR: Burgess Sand PIPELINE CONNECTION: Lags/Leavenworth Joint Venture

COMPLETION DATE: 10-25-85 PLUG BACK TOTAL DEPTH: 1476' PACKER SET AT: None

CASING SIZE: 4 1/2" WT. I.D. SET AT: 1476' PERF. TO: 1426' 1432'

TUBING SIZE: N/A WT. I.D. SET AT: PERF. TO:

TYPE COMPLETION (Describe): Single (Gas) TYPE FLUID PRODUCTION: None

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

GAS GRAVITY - G_g: 0.584 % CARBON DIOXIDE: % NITROGEN: API GRAVITY OF LIQUID: N/A

VERTICAL DEPTH (H): TYPE METER CONN.: N/A (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		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						470	484.4	—		3 mos.	
FLOW	0.500	166.7	N/A	77		330	344.4	—		24	0

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _p)(F _d) Mcd	(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 Mcd	GOR	G _m
4.388	181.1	—	1.309	0.9840	1.016	1040	None	.584

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_d)² = 234.6 ; (P_w)² = 118.6 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_w)² = 0.207 ; (P_d)² = _____

$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_a^2}{P_c^2 - P_d^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcd
234.4	116.0	2.0207	0.3056	0.850	0.2598	1.819	1891.9

OPEN FLOW Mcd @ 14.65 psia DELIVERABILITY 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) _____ For Commission
 _____ For Company
 _____ Checked by

October, 1986

29
12-1786

Fitzgerald #1

Operator-- L. V. Gas, Inc.
Operator License Number-- 4898
Operator Address-- 222 W. Main; Chanute, KS 66720
Operator Phone Number-- (316) 431-3141
Lease-- Fitzgerald
Location-- NW SW 31
Township-- 8S
Range-- 22E
County-- Leavenworth
Gas Purchaser-- LAGGS
Gas BTU's-- "

INITIAL OPEN FLOW CALCULATION

Flowing Pressure on Prover (psi)--	270
Shut-In Pressure on Prover (psi)--	375
Orifice Size (3/4 inch) and Coefficient--	224.9
Specific Gravity--	.5919
Temperature of Gas (+459.69F)--	537.69
Open Flow (MCF/D)	3,403.8
One-Quarter of Open Flow (MCF/D)--	850.9
Adjusted State Allowable (MCF/D)--	850.9

CURRENT OPEN FLOW CALCULATION

Flowing Pressure on Prover (psi)--	
Shut-In Pressure on Prover (psi)--	
Orifice Size (inch) and Coefficient--	
Specific Gravity--	
Temperature of Gas (+459.69F)--	
Open Flow (MCF/D)--	
One-Quarter of Open Flow (MCF/D)--	
Adjusted State Allowable (MCF/D)--	
Current Production Rate (MCF/D)--	57.7

TESTER--Larry Culbertson--LAGGS, INC.--913-773-8514
COMMENTS--