

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

FORM O-3  
 8-7-58

TYPE TEST:  Deliverability  Open Flow TEST DATE: 1-14-90

COMPANY: Lobo Production Inc LEASE: Rueb-Farms WELL NO.: 1-2

COUNTY: Cheyenne LOCATION: SECTION 2 TWP: 35 RNO: 42W. ACRES: ANBKCC

FIELD: Benkelman RESERVOIR: Niobrara PIPELINE CONNECTION: KNE

COMPLETION DATE: Comp. 11-24-77 PLUG BACK TOTAL DEPTH: T.O. 1870 Packer Set At: CS TO 1380

CASING SIZE: 4 1/2" WT. 10.5 I.D. SET AT 1380 PERF. 1232 TO 1264

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

TYPE COMPLETION (Describe): Single TYPE FLUID PRODUCTION: NONE

PRODUCING THRU: CSG RESERVOIR TEMPERATURE: F BAR. PRESS - P<sub>a</sub>: 14.4 Psia

GAS GRAVITY - G<sub>g</sub>: .594 % CARBON DIOXIDE % NITROGEN API GRAVITY OF LIQUID

VERTICAL DEPTH (H): Same TYPE WTR. CONN.: (METER RUN)(PROVER) SIZE: 2" Flange

SHUT-IN PRESSURE: SHUT IN 1-4-90 1990 AT (AM)(PM) TAKEN 1-10 1990 AT (AM)(PM)

FLOW TEST: STARTED 1-14 1990 AT (AM)(PM) TAKEN 2-7 1990 AT (AM)(PM)

OBSERVED DATA

DURATION OF SHUT-IN: 144 HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. (h <sub>w</sub> )(h <sub>d</sub> )	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASENO WELLHEAD PRESS		TUBING WELLHEAD PRESS		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P <sub>w</sub> )(P <sub>i</sub> )(P <sub>c</sub> ) psia	psig	(P <sub>w</sub> )(P <sub>i</sub> )(P <sub>c</sub> ) psia		
SHUT-IN		120				206	220.4		14	144	
FLOW	.3125	98	3"			105	119.4			24	

RATE OF FLOW CALCULATIONS

COEFFICIENT (F <sub>1</sub> )(F <sub>2</sub> ) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION √P <sub>m</sub> h <sub>w</sub>	GRAVITY FACTOR F <sub>g</sub>	FLOWING TEMP. FACTOR F <sub>t</sub>	DEVIATION FACTOR F <sub>pv</sub>	RATE OF FLOW R Mcfd	GOR	G <sub>m</sub>
.4752	112.4	18.36 / √112.4	1.2975	1.00	1.00	11.32		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = 48.58, (P<sub>w</sub>)<sup>2</sup> = 14.26, P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_, (P<sub>d</sub>)<sup>2</sup> = 0.207

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup>	(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
48.373	34.32	1.40947	0.149056	0.95	0.126697	1.33874	15.2

OPEN FLOW 15 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 20 day of March, 1990

Witness (if any) \_\_\_\_\_ For Commission

\_\_\_\_\_ For Company

Checked by \_\_\_\_\_