

15-023-20242-00-00
STATE OF KANSAS - CORPORATION COMMISSION
 ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

289
5-11-86

FORM O-2
8-7-58

TYPE TEST: Deliverability Open Flow TEST DATE: 2/25/86

COMPANY: FMP Operating Co. LEASE: Rueb WELL NO.: 2-16

COUNTY: Cheyenne LOCATION: NESE 1/4 SECTION: 16 TWP: 3S RNG: 42W ACRES: .

FIELD: Rueb RESERVOIR: Niobrara PIPELINE CONNECTION: None

COMPLETION DATE: 2/26/86 PLUG BACK TOTAL DEPTH: 1717' PACKER SET AT:

CASINO SIZE: 4 1/2" WT.: 9.5# I.D.: L.D.: SET AT: 1713' PERF.: 1524 TO: 1556

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

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

PRODUCING THRU: Casing RESERVOIR TEMPERATURE F: Est. Bar. Press. @ 12.6 Psia BAR. PRESS - P_a

GAS GRAVITY - G_g: Actual - .598 % CARBON DIOXIDE: NITROGEN: API GRAVITY OF LIQUID:

VERTICAL DEPTH (H): None TYPE METER CONN.: None (METER) (METER) (PROVER) SIZE: Tested with 2" Critical Flow Prover

SHUT-IN PRESSURE: SHUT IN: 19 AT: (AM)(PM) TAKEN: 2/25 19 86 AT 12:50 (AM)(PM)

FLOW TEST: STARTED: 2/25 19 86 AT 12:55 (AM)(PM) TAKEN: 2/26 19 86 AT 1:35 (AM)(PM)

OBSERVED DATA DURATION OF SHUT-IN 2 wks+

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	Blank	290.2				290.2	302.8				
FLOW	3/8"	134.0		63°		134.0	146.6			24 3/4	None

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _b)(F _d) / Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m \times h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
2.439	146.6		1.293	.9971	1.012	466.5		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 91.7 ; (P_w)² = 21.5 ; P_d² = _____ % (P_c - 14.4) + 14.4 = _____ (P_w)² = 0.207 .2 (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
91.5	70.2	1.3034	.1151	.687 *	.0791	1.1997	559.6

OPEN FLOW 560 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 28th day of February, 1986.

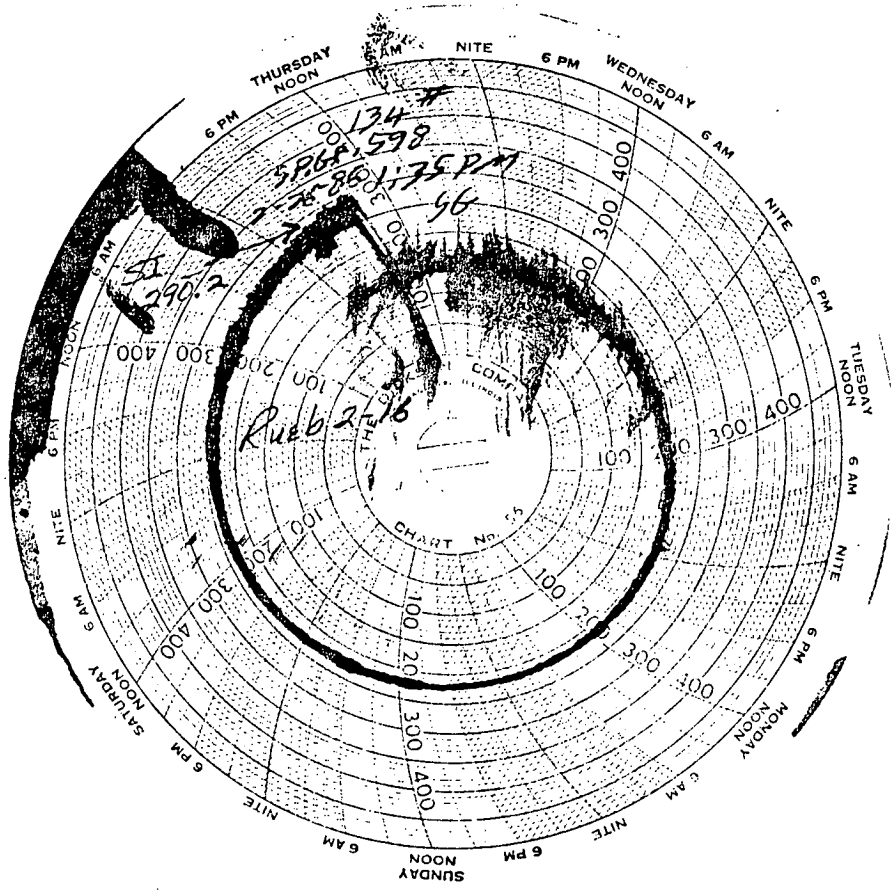
*taken from Rueb 1-16 well test

Stan Holmes
For Company

Witness (if any)

For Commission

Checked by



KANSAS-NEBRASKA NATURAL GAS COMPANY, INC.
Back Pressure Field Data Sheet

Date of Test 2/25 1986

Lease Rueb Well No. 2-16 Company FMP Operating
Field Armel County Cheyenne State Ks. Location SE 1/4 16-35-420
Production Casing 4 1/2 Wt. 10.5 Set at 1715 Perf. _____ to _____
Tubing Size None Set at _____ Perf. _____ to _____
Meter run None Conn. _____ Shut-in Pressure 290.2 psig. Well shut in 2 1/2 hrs.
Gravity 598 (Before or After)

Test Run on: Casing, Tubing, Annulus (Cross out those not applicable.)
Other remarks about test set-up: Test Run on 2" Critical Flow Prover

OBSERVATIONS

Date	Time	Orif. Size	Flow. Temp.	Meter or Prover Pressure psig	Diff. h _w Inches of Water	Wellhead Working Pressure psig	Remarks
<u>2/25/86</u>	<u>12:50</u>	<u>Blank</u>		<u>290.2</u>		<u>290.2</u>	<u>S.I. Pressure (P.W.)</u>
		<u>2x</u>					
<u>2/25/86</u>	<u>12:58</u>	<u>.375</u>					<u>Start 24 hr. Open Flow Test SW</u>
"	<u>1:10P</u>	<u>.375</u>	<u>64°</u>	<u>269.5</u>		<u>269.5</u>	<u>Blowing Dry; 7.1% D.D.</u>
		<u>2x</u>					
<u>2/26/86</u>	<u>1:35P</u>	<u>.375</u>	<u>63°</u>	<u>134.0</u>		<u>134.0</u>	<u>Blowing Dry; 53.8% D.D.</u>
<u>A Sample Was Taken for Specific Gravity;</u>							
<u>Well Was Shut In @ 1:40P.M. 2/26/86</u>							

MAR - 4 1986

Tested By Stanley Helms
Witness _____

STATE COMMISSION

MAR 10 1986

CONSERVATION DIVISION
Wichita, Kansas