

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

FORM O-2  
8-7-58

15-023-20054-000

TYPE TEST:  Deliverability  Open Flow TEST DATE: 2-14-81

COMPANY: Murphy Drilling Co. LEASE: Rush Farms WELL NO.: 1-2

COUNTY: Cherokee LOCATION: SECTION 2 TWP 5 RNO 42 ACRES 640

FIELD: Cherry Creek RESERVOIR: Nesbarn PIPELINE CONNECTION: Kans Nbr Nat Gas

COMPLETION DATE: 1-10-80 PLUG BACK TOTAL DEPTH: 1300 PACKER SET AT

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

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

TYPE COMPLETION (Describe) TYPE FLUID PRODUCTION

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

GAS GRAVITY - G<sub>r</sub> 580 % CARBON DIOXIDE % NITROGEN API GRAVITY OF LIQUID

VERTICAL DEPTH (H) TYPE METER CONN. PL (METER RUN)(PROVER) SIZE 2"

SHUT-IN PRESSURE: SHUT IN 2-14 19 81 AT (AM)(PM) TAKEN 2-17 19 81 AT (AM)(PM)

FLOW TEST: STARTED 2-17 19 81 AT (AM)(PM) TAKEN 2-18 19 81 AT (AM)(PM)

**OBSERVED DATA** DURATION OF SHUT-IN \_\_\_\_\_ 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	CASING 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		
BHUT-IN						144.0	158.4				
FLOW	<u>3/8</u>	<u>48.0</u>	<u>26.0</u>			<u>124.8</u>	<u>129.2</u>				

**RATE OF FLOW CALCULATIONS**

COEFFICIENT (F <sub>p</sub> )(P <sub>p</sub> ) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F <sub>g</sub>	FLOWING TEMP. FACTOR F <sub>L</sub>	DEVIATION FACTOR F <sub>pv</sub>	RATE OF FLOW R Mcfd	GOR	G <sub>m</sub>
<u>6860</u>	<u>62.4</u>	<u>40.279</u>	<u>1.313</u>	<u>1.000</u>	<u>1.000</u>	<u>31.0</u>		

**(OPEN FLOW) (DELIVERABILITY) CALCULATIONS**

(P<sub>c</sub>)<sup>2</sup> = 25.1 (P<sub>w</sub>)<sup>2</sup> = 19.4 P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ (P<sub>c</sub>)<sup>2</sup> = 0.207 (P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
<u>24.9</u>	<u>5.7</u>	<u>4.3684</u>	<u>.6403</u>	<u>.820</u>	<u>5251</u>	<u>3.3502</u>	<u>104</u>

OPEN FLOW 104 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)  
[Signature]  
For Commission

For Company  
Checked by

FEB 24 1981  
DIVISION