

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 11/4/77		NOV 9 1977	
Company Gulf Oil Corp.				Connection None		O. C. C.	
Pool Undesignated <i>Morrow</i>				Formation Morrow		Unit ARTESIA, OFFICE I	
Completion Date 10/27/77		Total Depth 8810		Plug Back TD 8771		Elevation 3624	
Csg. Size 5 1/2		Wt. 15.5 & 17		Set At 8810		Perforations: From 8603 To 8641	
Tbg. Size 2 3/8		Wt. 4.7		Set At 8583		Perforations: From To	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single				Packer Set At 8543		County Eddy	
Producing Thru Tbg.		Reservoir Temp. °F 160 @ 8622		Mean Annual Temp. °F		Baro. Press. - P _g New Mexico	
L 8622	H 8622	Gg .620	% CO ₂ .007	% N ₂ .0077	% H ₂ S	Prover	Meter Run 4"
Taps Flg.							

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
1.	4 X 1.500			550	10.0	79	2425				72 hr.
2.	4 X 1.500			550	21.0	85	2320				1 hr.
3.	4 X 1.500			550	40.0	89	2240				1 hr.
4.	4 X 1.500			550	80.5	85	2130				1 hr.
5.							1902				1 hr.

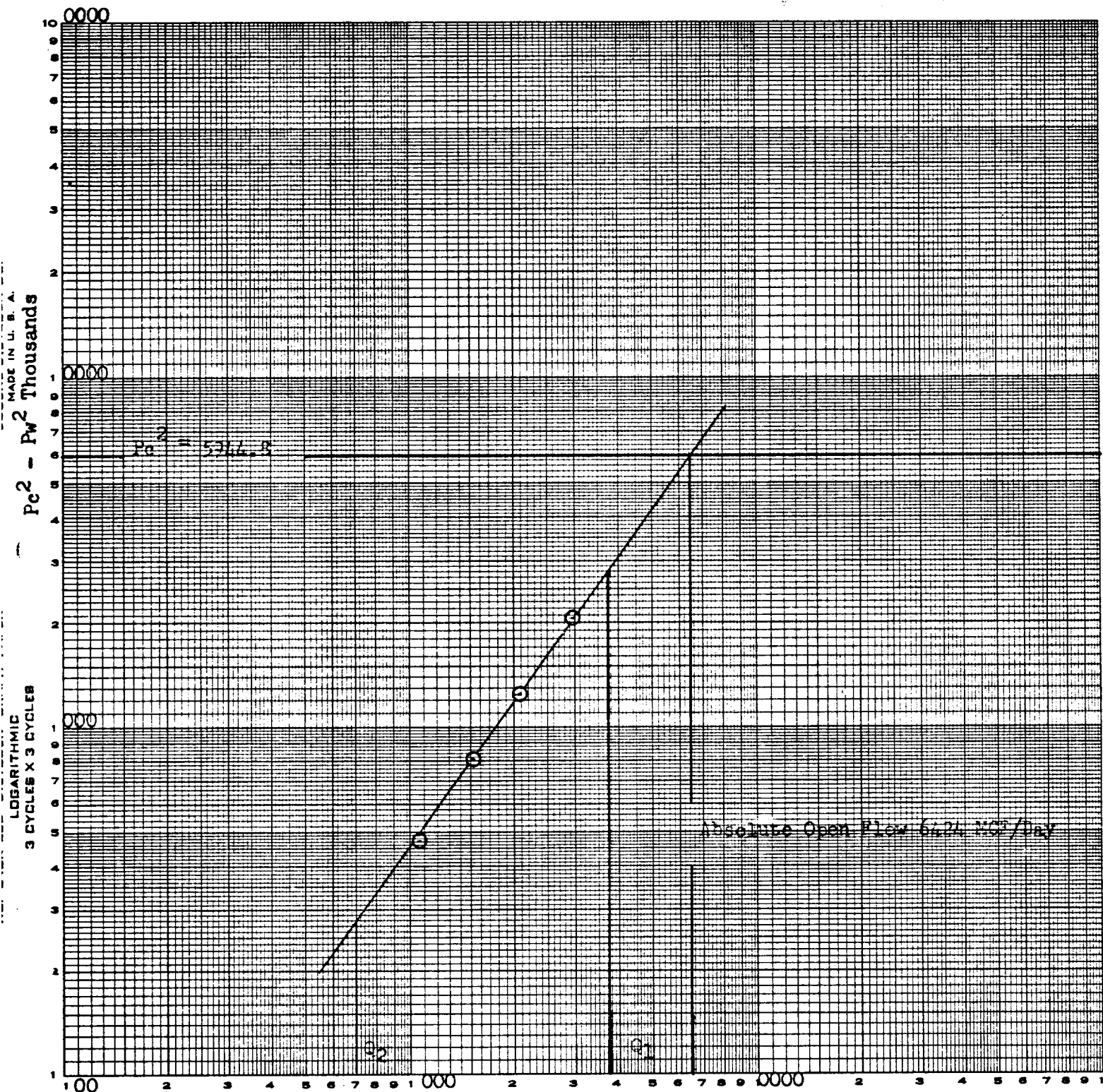
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	10.84	75.05	563.2	.9822	1.270	1.047	1062
2.	10.84	108.75	563.2	.9768	1.270	1.045	1528
3.	10.84	150.09	563.2	.9732	1.270	1.044	2099
4.	10.84	212.93	563.2	.9768	1.270	1.045	2992
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>Dry</u> Mcf/bbl.
1.	.84	539	1.48	.913	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	.84	545	1.49	.915	Specific Gravity Separator Gas <u>.620</u> X X X X X X X X
3.	.84	549	1.50	.917	Specific Gravity Flowing Fluid X X X X X
4.	.84	545	1.49	.915	Critical Pressure <u>671</u> P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature <u>365</u> R _____ R

P _c <u>2438.2</u>	P _c ² <u>5944.8</u>					
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \underline{2.894}$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{2.147}$
1.		2339.8	5474.7	470.1	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{6.424}$	<i>Tested back ID-2 & back 11-11-77 5 I</i>
2.		2266.4	5136.6	808.2		
3.		2169.0	4704.6	1240.2		
4.		1972.5	3890.8	2054.0		
5.						

Absolute Open Flow <u>6.424</u> Mcfd @ 15.025	Angle of Slope @ <u>54.10°</u>	Slope, n <u>.729</u>
Remarks:		
Approved By Commission: _____ Conducted By: <u>Larry Davis</u> Calculated By: <u>Larry Davis</u> Checked By: _____		

Company: Gulf Oil Corp
 Lease: Eddy "GK" Stat Comm
 Well No: # 1
 Field: Undesignated
 County: Eddy
 Date: 11-4-77

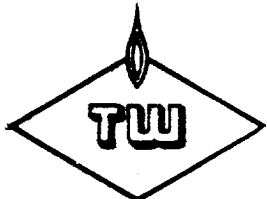


$$Q = \text{MCF/Day}$$

$$Q_1 = 3750 \text{ MCF} = \text{Log of } Q_1 = 3.5740313$$

$$Q_2 = 700 \text{ MCF} = \text{Log of } Q_2 = 2.8450980$$

$$N = .7289333$$



GAS QUALITY TEST REPORT

COMPANY SELLER GULF PET. C. STA. NO. -
FIELD OR LOCATION UNDES. CONTRACT NO. -
SOURCE OR RESERVOIR MORROW TEST DATE 11 04 77
WELL OR STATION NAME GULF EDDY GK #1 LAB 4

COMPOUND COMPONENTS	COMPONENT SPECIFIC GRAVITY	COMPONENT MOLE FRACTION	LIQUEFIABLE HYDROCARBONS	COMPONENT G. P. M.	MOLE FRACTION	G. P. M. CONTENT
NITROGEN	.9672	.0077	PROPANE	27.514	.	
CARBON DIOXIDE	1.5195	.0070	ISO-BUTANE	32.698	.	
HELIUM	.1382	.	N-BUTANE	31.510	.	
OXYGEN	1.1048	.0009	LPG - - - - -			
HYDROGEN SULFIDE	1.1766	.	ISO-PENTANE	36.582	.	
WATER VAPOR	.6220	.	N-PENTANE	36.213	.	
HYDROCARBON DILUENTS		(.0156)	HEXANES	41.111	.	
METHANE	.5539	.9101	HEPTANES +	46.126	.	
ETHANE	1.0382	.0523	NATURAL GASOLINE - - - - -			
PROPANE	1.5225	.0135	TOTAL LIQUEFIABLE GPM			
ISO-BUTANE	2.0068	.0019	WATER VAPOR CONTENT:			
N-BUTANE	2.0068	.0025	Gas Mixture Static Pressure PSI			
ISO-PENTANE	2.4910	.0009	Hydrocarbon Dew Point °F			
N-PENTANE	2.4910	.0007	Water Vapor Dew Point °F			
HEXANES	2.9753	.0015	Lbs Water Vapor per MMCF			
HEPTANES +	3.7018	.0010	Conversion Constant			
			Water Vapor Mole Fraction			
			Moisture recorder reading			
			Make or type			

COMPOSITION - - - - - 1.0000

MIXTURE SPECIFIC GRAVITY:

Calculated From Analysis

.619

Determined by Test Instrument

.620

Instrument Make or Type

RNX

MIXTURE HEATING VALUE:

(Btu/cf at 14.73 Psia, 60°F, Sat.)

Calculated From Analysis

1065

Determined by Calorimeter

Calorimeter Verified

SULFUR CONTENT:

H₂S - Hydrogen Sulfide, Gr./100 cf

.02

RSH - Mercaptans

.00

RSR - Sulfides

.09

RSSR - Residuals

.09

Total Sulfur, Gr./100 cf

.20

H₂S Grains to fraction conversion

X 0.0000157

H₂S Mole Fraction

Critical Pressure Critical Temperature

REMARKS

4 Point Well Test

MEASUREMENT
AREA

Roswell

GAS
ANALYST

Heston