

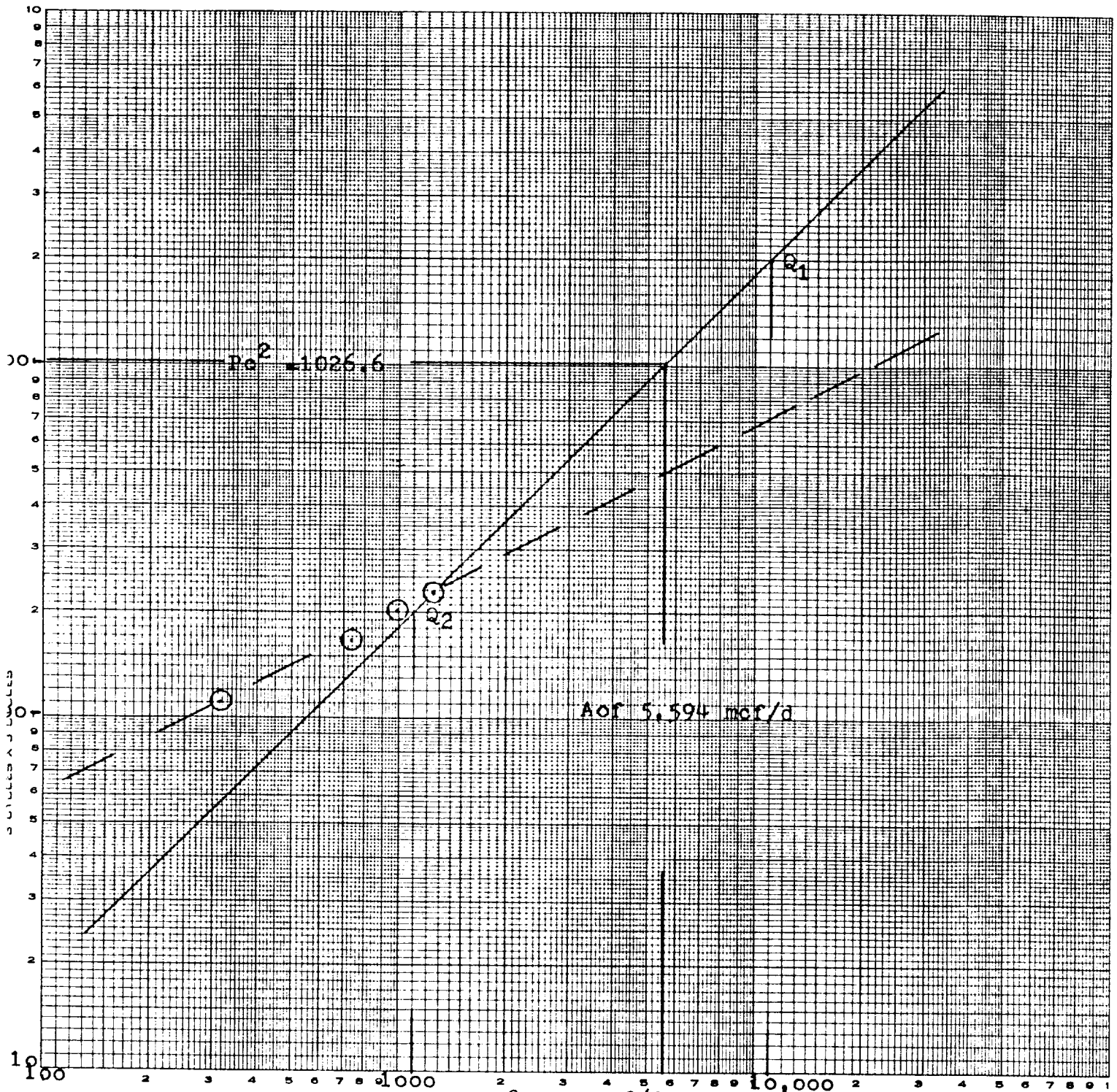
MULTIPLE AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form 1122
Revised 9-1-65

45F
RECEIVED File

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 10/06/82		MAY 13 1983							
Company PETROLEUM DEVELOPMENT CORPORATION			Collection AIR		O. C. D. ARTESIA, OFFICE						
Pool <i>Pecos Slope Also</i> UNDESIGNATED			Formation ABO								
Completion Date 9/12/82		Total Length 4703	Flow Rate, T.D. 4530 4654	Elevation 3796.8GL	Point of Lease Line LAURALEA						
Csg. Size 4 1/2	Wt. 10/50	Set At 4783	Perforations: From 4406 To 4419 4573		Well No. 1						
Tub. Size 2 3/8	Wt. 4.7	Set At 4481 4398	Perforations: From To		Unit Sec. Twp. Rge. D 35 7S 26E						
Type Well - Single - Prodenhead - G.G. or G.O. Multiple SINGLE GAS			Packer Set At NONE		County CHAVES						
Producing Thru TBG.		Reservoir Temp. °F 118a 4390	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2	State NEW MEXICO						
L 4390	H 4390	G _g .6546	% CO ₂ .941	% N ₂ 5.252	% H ₂ S Prover 2 "						
FLOW DATA			TUBING DATA		CASING DATA						
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
SI							998		1000		72 hrs.
1.	2 x 1/4			860		70	860		880		2 hrs.
2.	2 x 7/32			881		72	881		896		1 hr.
3.	2 x 3/16			902		69	902		913		1 hr.
4.	2 x 3/16			382		45	932		940		1 hr.
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mgd				
1	1.0870		873.2	.9905	1.236	1.076	1250				
2	.8393		894.2	.9887	1.236	1.075	986				
3	.6082		915.2	.9915	1.236	1.079	736				
4	.6082		395.2	1.0150	1.236	1.040	314				
5											
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio DRY Mcf/bbl.						
1	1.31	530	1.47	.864	A.P.I. Gravity of Liquid Hydrocarbons						
2	1.34	532	1.48	.866	Specific Gravity Separator Gas .6546						
3	1.38	529	1.47	.859	Specific Gravity Flowing Fluid X X X X X						
4	.59	505	1.40	.924	Critical Pressure 665 P.S.I.A.						
5					Critical Temperature 360 R						
$P_c = 1013.2$ $P_c^2 = 1026.6$											
NO.	BHP	P _w	P _w ²	P _c ² - P _w ²	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 4.475$ $(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.475$						
1	997.2	892.9	797.2	229.4	$ADP = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.594$						
2	1015.2	908.7	825.8	200.8							
3	1036.2	927.3	859.9	166.7							
4	1070.2	957.3	916.3	110.3							
5	1134.2	S.I.P.									
Absolute Open Flow 5.594 Mgd @ 15.025 Angle of Slope 450 Slope, n 1.000											
Remarks:											
Approved by Consultant:				Conducted By: DAVIS SERVICES, INC.				Calculated By: RICK PAGAN			
Checked By:											

COMPANY : PETROLEUM DEVELOPMENT CORP.
 LEASE : LAURALEA
 WELL # : 1
 UNIT : D / SEC 35 / TWP 7 S / RGE 26 E
 COUNTY : CHAVES
 STATE : NEW MEXICO
 DATE : 10/06/82



Q_1 LOG 11,000 = 4.041393
 Q_2 LOG 1,100 = 3.041393
 $N = 1.000$
 $\theta = 45^\circ$

NEW-TEX LAB

PHONE 505/393-3581

P. O. BOX 1161

811 W. SNYDER

HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT: DAVISS SERVICES
ADDRESS: P O BOX 2033
CITY, STATE: HOBBS NM 88240

ANALYSIS NUMBER: 8455
DATE OF RUN: 10/08/82
DATE SECURED: 10/06/82

SAMPLE IDENT: PETROLEUM DEVELOPMENT CORP - LAURALEA - #1
SAMPLING PRESS: SAMPLING TEMP:

***** GAS ANALYSIS *****

	MOLE PERCENT	GAL/ MCF
NITROGEN	5.252	
CARBON DIOXIDE	0.941	
METHANE	84.964	
ETHANE	5.712	1.523
PROPANE	1.696	0.466
ISO-BUTANE	0.275	0.090
NORMAL BUTANE	0.530	0.167
ISO-PENTANE	0.154	0.056
NORMAL PENTANE	0.161	0.058
HEXANES	0.128	0.053
HEPTANES PLUS	0.187	0.086
TOTAL	100.000	2.499

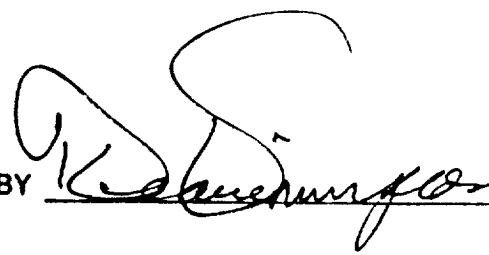
PROPANE GPM:	0.47	BUTANES GPM:	0.26
ETHANE GPM:	1.52	PENTANES PLUS GPM:	0.25

SPECIFIC GRAV (CALC): 0.6546
MOLE WEIGHT: 18.97

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
	14.696	1039	1057
	14.650	1036	1054
	14.730	1041	1060
	14.735	1042	1060

ANALYZED BY: R H HAMILTON

APPROVED BY



WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (RX or Pw)

Form C-122F
Adopted 9-1-85

PETROLEUM

COMPANY DEVELOPMENT CORP. LEASE LAURA LEA WELL NO. 1 DATE 10/06/82

LOCATION: Unit D Section 35 Township 7 S Range 26 E

L 4390 H 4390 L/H 1.000 G .6546 % CO₂ .941 % N₂ 5.252 % H₂S

GH 2874 P_{cr} 665 T_{cr} 360

TABLE 11.8.1

TABLE 11.8.2

1st RATE

2nd RATE

3rd RATE

4th RATE

LINE	1	2	3	4	5	6	7	8
1	534	534	534	534	534	534	534	534
2	578	578	578	578	578	578	578	578
3	556	556	556	556	556	556	556	556
4	.871	.877	.869	.875	.866	.873	.863	.869
5	484.3	487.6	483.2	486.5	481.5	485.4	479.8	483.2
6	5.935	5.894	5.948	5.908	5.969	5.921	5.990	5.95
7	1.249	1.247	1.250	1.248	1.251	1.249	1.252	1.250
8	997.2	997.2	1015.2	1015.2	1036.2	1036.2	1070.2	1070.2
9	994.4	994.4	1030.6	1030.6	1073.7	1073.7	1145.3	1145.3
10	796.0	797.2	824.6	825.8	858.4	859.9	914.9	916.3
11	892.2	892.9	908.1	908.7	926.5	927.3	956.5	957.3
12	944.7	945.0	961.6	962.0	981.3	981.8	1013.4	1013.7
13	1.42	1.42	1.45	1.45	1.48	1.48	1.52	1.52
14	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
15	.877	.877	.875	.875	.873	.873	.869	.869

TABLE 11.8.1

TABLE 11.8.2

1st RATE

2nd RATE

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4th RATE

