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appropriate district office.
See Rule 401 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-122
Revised October, 1999

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

30-015-33567

Operator PERENCO OPERATING				Lease or Unit Name STATE 1625			
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11-01-04	Well No. 291
Completion Date		Total Depth		Plug Back TD		Elevation	Unit Ltr - Sec - TWP - Rge 29-16-25
Csg. Size 7" 4 1/2"	Wt. 26	d	Set At 4272.39 - 414	Perforations: From: OPEN To: HOLE		County EL PASO	
Tbg. Size 2 3/8	Wt. 4.7	d 2.441	Set At 4686	Perforations: From: To:		Pool NOV 15 2004	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 4686		Formation ODDARTERIA	
Producing Thru TBG		Reservoir Temp. °F 120.9 @ 4686		Mean Annual Temp. °F 60		Baro. Press. -P _a 13.2	
L 5500	H 4686	Gg 0.669	%CO ₂ 3.433	%N ₂ 0.732	%H ₂ S X	Prover N/A	Meter Run 3.068
Taps FLG							
FLOW DATA				TUBING DATA			
No.	Prover Line Size	Orifice x Size	Press p.s.i.g.	Diff. h _w	Temp. °F	Press p.s.i.g.	Temp. °F
SI						1450	PKR
1	3 X	1000	35	17.6	65	1360	"
2	3 X	1000	237	20.25	60	1250	"
3	3 X	1000	237	20.25	58	1090	"
4	3 X	1000	371	22.09	59	900	"
5							
RATE OF FLOW CALCULATIONS							
No.	COEFFICIENT (24 Hour)		$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress Factor F _{pv}
1	4.789		29.13	48.2	0.9952	1.223	1.024
2	4.789		71.18	250.2	1	1.223	1.025
3	4.789		71.18	250.2	1.002	1.223	1.025
4	4.789		92.12	384.2	1.001	1.223	1.043
5							
No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio DRY GAS Mcf bbl.		
1	0.07	525	1.4	0.953	A.P. I. Gravity of Liquid Hydrocarbons DRY Deg.		
2	0.36	520	1.39	0.951	Specific Gravity Separator Gas 0.669 XXXXXXXX		
3	0.36	518	1.38	0.951	Specific Gravity Flowing Fluid XXXXXX N/A		
4	0.56	519	1.39	0.92	Critical Pressure * 682 P.S.I.A. N/A P.S.I.A.		
5					Critical Temperature * 373 R. N/A R		
P _c 1463.2 P _w 2141							
No.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.646$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.46$		
1		1373.4	1886.2	254.7			
2		1264.5	1598.9	542			
3		1104.7	1220.4	920.5			
4		916.5	840	1301			
5							
Absolute Open Flow 822 Mcfd @ 15.025				Angle of Slope (°): 52.8 Slope n: 0.7603			
Remarks: *= Corrected to 3.433 % CO2---Well produced 4.00 bbls H2O							
Approved By Division:		Conducted By: Metering & Testing Serv., Inc.		Calculated By: BM		Checked By: BM	

COMPANY : PERENCO OPERATING LEASE : STATE 1625 WELL NO. : 291 Pc = 1463.2 Pc2 = 2141.0 *
 UNIT : SECTION : 29 TOWNSHIP : 16
 L : 5500 H : 4686 L/H : 1 G/GMIX : 0.669 Pt2 = 1885.7 Pw = 1373.4 *
 %CO2 : 43.433 %N2 : 0.732 H2S : DATE : 11-01-04 1595.7 1264.5 *
 d : 1.995 Fr : 0.018231 GH : 3134.9 RANGE : 25 1217.1 1104.7 *
 833.9 916.5 *

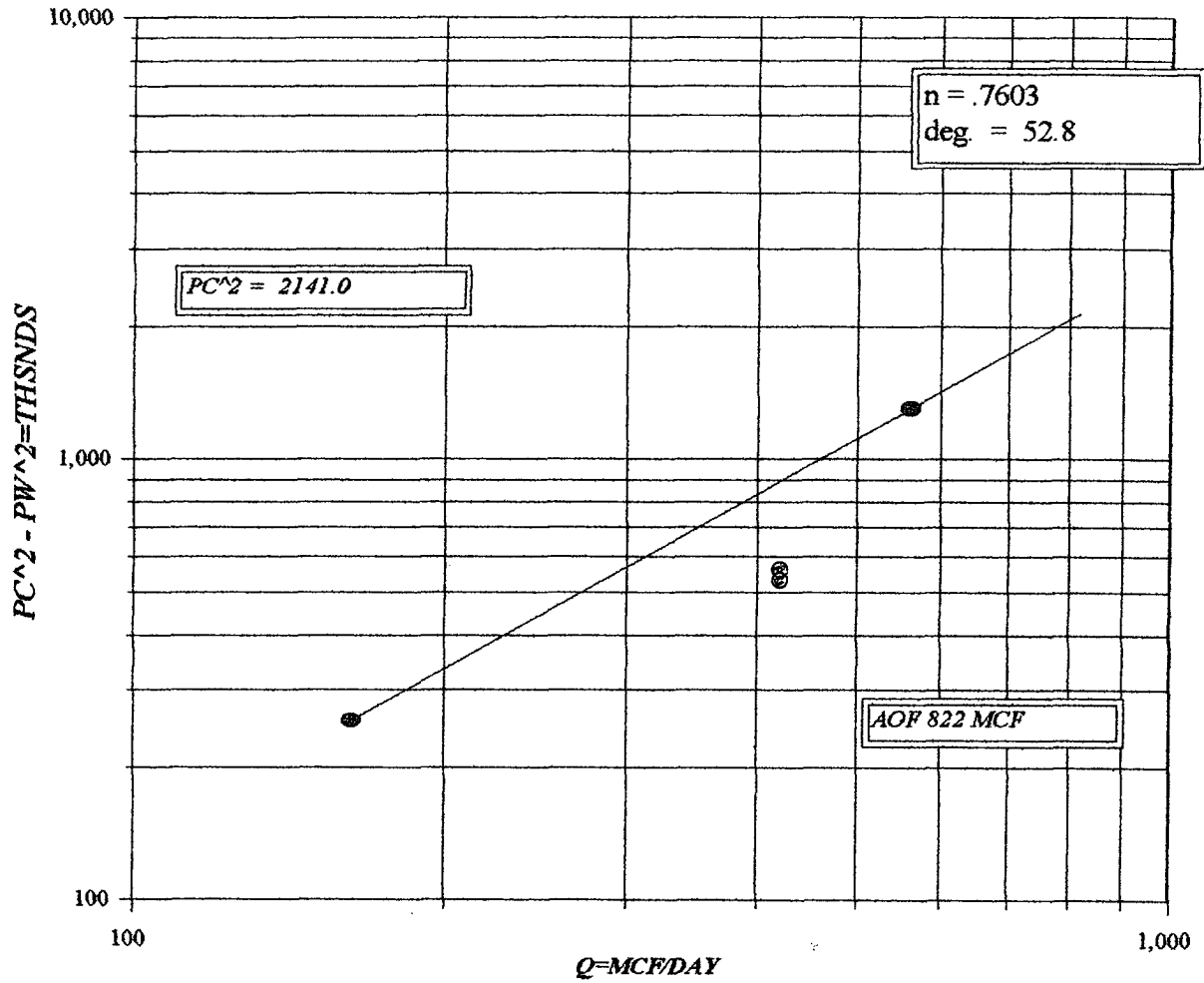
VOL 1 : 174 PSIA 1 : 1373.2 RESV.TEMP 120.9 Pc2-Pw2= 254.7 Pw2 = 1886.2 *
 VOL 2 : 427 PSIA 2 : 1263.2 542.0 1598.9 *
 VOL 3 : 428 PSIA 3 : 1103.2 SHUT-IN PR= 1463.2 920.5 1220.4 *
 VOL 4 : 563 PSIA 4 : 913.2 1301.0 840.0 *

PCR : 682 n = 0.760 ✓ *
 TCR : 373

LINE	RATE 1		RATE 2		RATE 3		RATE 4		
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND	
1 QM	0.174	0.174	0.427	0.427	0.428	0.428	0.563	0.563	
2 TW	534	534	534	534	534	534	534	534	[Pc2/Pc2-Pw2]n = 5.042 *
3 Ts	580.9	580.9	580.9	580.9	580.9	580.9	580.9	580.9	2.841 *
4 T	557.4	557.4	557.4	557.4	557.4	557.4	557.4	557.4	1.899 *
PR (est)	2.01		1.85		1.62		1.34		1.460 ✓ *
5 Z(est)	0.797	0.788	0.808	0.799	0.826	0.817	0.849	0.841	
6 TZ	444.3	439.3	450.5	445.5	460.4	455.5	473.2	468.9	AOF= Q 0.877 *
7 GH/TZ	7.056	7.136	6.959	7.038	6.810	6.882	6.625	6.686	1.213 *
8 eS	1.303	1.307	1.298	1.302	1.291	1.294	1.282	1.285	0.813 *
9 l-e-S	0.232	0.235	0.230	0.232	0.225	0.227	0.220	0.222	0.822 ✓ *
10 Pt	1373.2	1373.2	1263.2	1263.2	1103.2	1103.2	913.2	913.2	
11 Pt2 /1000	1885.7	1885.7	1595.7	1595.7	1217.1	1217.1	833.9	833.9	
12 Fr	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	
13 Fc=FrTZ	8.100	8.009	8.213	8.121	8.393	8.305	8.627	8.548	
14 FcQm	1.41	1.39	3.51	3.47	3.59	3.55	4.86	4.81	
15 L/H(FcQm)	2.3	2.3	14.4	14.1	15.1	14.8	27.7	27.2	
16 Pw	0.542050	0.535200	3.315472	3.273862	3.413182	3.373132	6.091138	6.0287380	
17 Pw2	1886.2	1886.2	1599.0	1598.9	1220.5	1220.4	840.0	840.0	
18 Ps2	2457.6	2464.9	2075.8	2081.8	1575.5	1579.7	1076.9	1079.3	
19 Ps	1567.7	1570.0	1440.8	1442.9	1255.2	1256.9	1037.7	1038.9	
20 P	1470.4	1471.6	1352.0	1353.0	1179.2	1180.0	975.5	976.0	
21 Pr	2.16	2.16	1.98	1.98	1.73	1.73	1.43	1.43	
22 Tr	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	
23 Z	0.788	0.788	0.799	0.799	0.817	0.817	0.841	0.841	FORM C122-D *

PERENCO OPERATING

STATE 1625 # 291





Laboratory Services, Inc.

2609 West Marland
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Metering & Testing Services Inc.
Attention: Mr. Tom Duncan
2807 West County road
Hobbs, New Mexico 88240

SAMPLE: IDENTIFICATION St. 1625 #291
COMPANY: Perenco
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED 11/1/04 2:q15 pm
ANALYSIS DATE: 11/2/04
PRESSURE - PSIG 240
SAMPLE TEMP. °F 80
ATMOS. TEMP. °F 48

GAS (XX) LIQUID ()
SAMPLED BY: Floyd Davis
ANALYSIS BY: Vickie Biggs

REMARKS:

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM
Hydrogen Sulfide	(H2S)		
Nitrogen	(N2)	0.735	
Carbon Dioxide	(CO2)	3.433	
Methane	(C1)	86.405	
Ethane	(C2)	5.601	1.494
Propane	(C3)	2.129	0.585
I-Butane	(IC4)	0.319	0.104
N-Butane	(NC4)	0.584	0.184
I-Pentane	(IC5)	0.184	0.067
N-Pentane	(NC5)	0.158	0.057
Hexane Plus	(C6+)	0.452	0.196
		100.000	2.687

BTU/CU.FT. - DRY 1090
AT 14.650 DRY 1087
AT 14.650 WET 1068
AT 14.73 DRY 1093
AT 14.73 WET 1074

MOLECULAR WT. 19.3888

SPECIFIC GRAVITY -
CALCULATED 0.669
MEASURED