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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

Operator GRUY PET. MANAGEMENT				Lease or Unit Name MESCALERRO : "30"			
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 8/30/03	Well No. 2
Completion Date 8/26/03		Total Depth 13750		Plug Back TD 13696		Elevation	Unit Ltr - Sec - TWP - Rge 30 19S 34E
Csg. Size 5 1/2	Wt. 17	d 4.892	Set At 13750	Perforations: From: 13412 To: 13430		County LEA	
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 13370	Perforations: From: To:		Pool	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 13370		Formation MORROW	
Producing Thru TUBING		Reservoir Temp. 208	Mean Annual Temp. 60	Baro. Press.-P _a 13.2		Connection SALES	
L 13370	H 13370	Gg 0.683	%CO ₂ 0.565	%N ₂ 0.651	%H ₂ S	Prover	Meter Run 3.068
Taps FLG							

FLOW DATA				TUBING DATA				CASING DATA				Duration of Flow
No.	Prover Line Size	Orifice x Size	Press p.s.i.g.	Diff. h _w	Temp.	Press p.s.i.g.	Temp.	Press p.s.i.g.	Temp.			
SI						4620		PKR				
1	3.068 X 1.500		565	39	74	3912				1 HR		
2	3.068 X 1.500		577	50	78	3777				1 HR		
3	3.068 X 1.500		592	70	81	3667				1 HR		
4	3.068 X 1.500		606	82	89	3556				1 HR		
5												

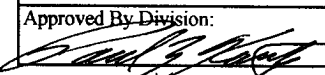
RATE OF FLOW CALCULATIONS							
No.	COEFFICIENT (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress Factor F _{pv}	Rate of Flow Q, Mcfd
1							1019
2							2635
3	TOTAL	FLOW	METER				3165
4							3406
5							

No.	P _r	Temp. R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Super Compress Factor F _{pv}	Rate of Flow Q, Mcfd
1					25.511		1019
2	TOTAL	FLOW	METER		A.P. I. Gravity of Liquid Hydrocarbons 54.1 @ 60		2635
3					Specific Gravity Separator Gas 0.683		3165
4					Specific Gravity Flowing Fluid XXXXX		3406
5					Critical Pressure 672 P.S.I.A. 669 P.S.I.A.		
					Critical Temperature 381 R. 417 R		

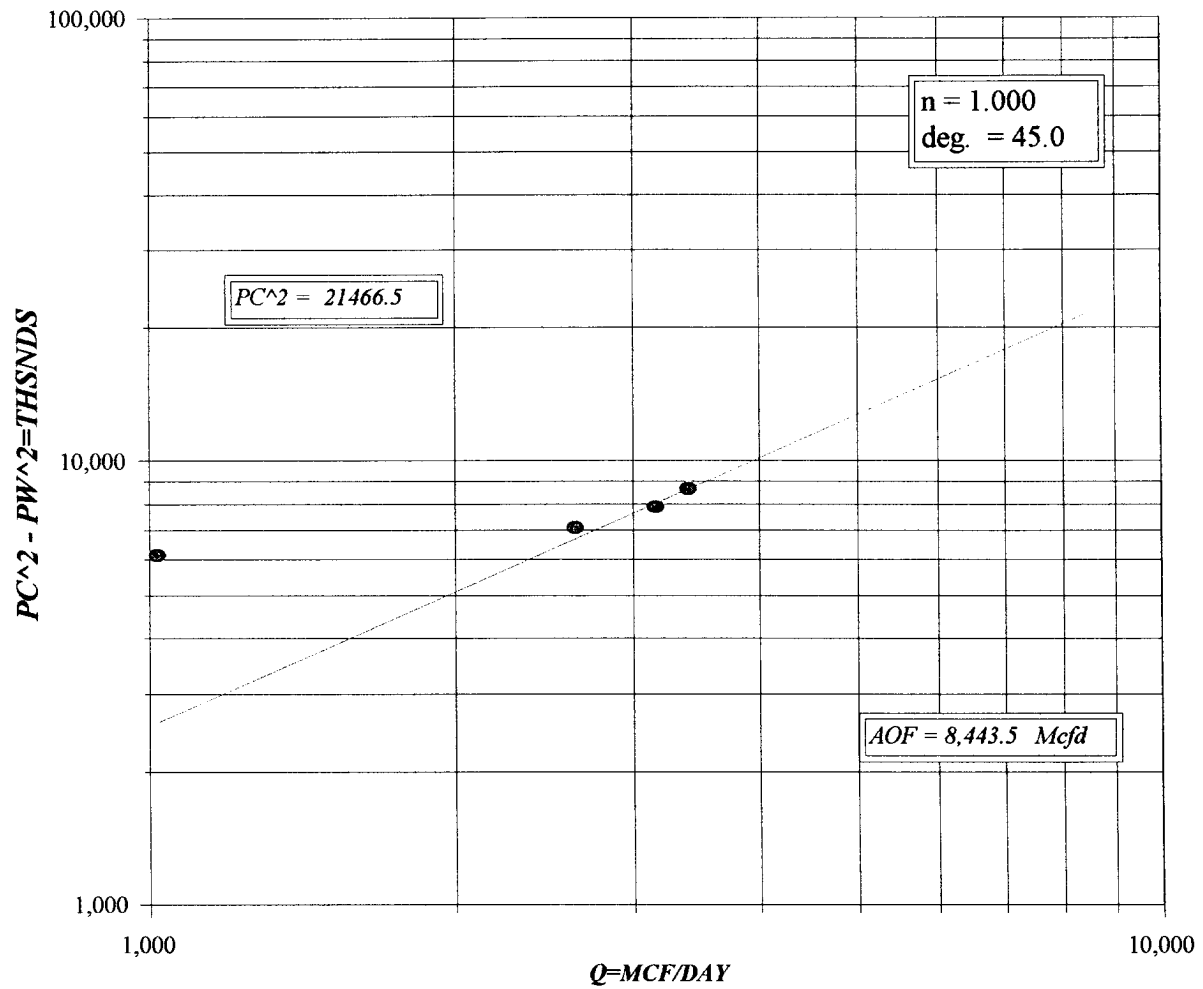
No.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1		3913.9	15318.8	6147.7	2.479	2.479
2		3790	14364.4	7102.1		
3		3686.1	13587.3	7879.2		
4		3578.5	12805.5	8661		
5						

Absolute Open Flow <u>8,443.50</u> Mcfd @ 15.025				Angle of Slope (°): <u>45</u>	Slope n: <u>1</u>
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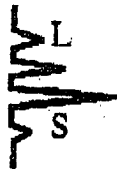
Remarks: * WELL MADE 16.7 BBLs OF CONDENSATE DURING TEST.

Approved By Division: 	Conducted By: PRO WELL TESTING	Calculated By: MERV BUECKER	Checked By: MB
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GRUY PET. MANAGEMENT
MESCALERRO "30" #2



COMPANY : GRUY PET. MANAGEMENT CO		LEASE : MISCALARRO 30"		WELL NO : 2		Pc = 4633.2		Pc2 = 21466.5	
UNIT :		SECTION : 30		TOWNSHIP : 19S		P12 = 15303.7		Pw = 3913.9	
L : 13370		H : 13370		L/H : 1		G/GMIX : 0.683		DATE : 8/30/03	
%CO2 : 0.565		%N2 : 0.651		H2S : 8197.0		RANGE : 34E		12645.1	
d : 2.441		Fr : 0.010763						3578.5	
=====									
VOL 1 : 1019		PSIA 1 : 3912.0		RESV.TEMP : 188.0		Pc2-Pw2 = 6147.7		Pw2 = 15318.8	
VOL 2 : 2635		PSIA 2 : 3777.0				7102.1		14364.4	
VOL 3 : 3165		PSIA 3 : 3667.0		SHUT-IN PRE! = 4633.2		7879.2		13587.3	
VOL 4 : 3406		PSIA 4 : 3556.0				8661.0		12805.5	
=====									
		PCR : 672				n = 1.000			
		TCR : 381				Pc2/(Pc2-Pw2) =		3.492	
LINE		RATE 1		RATE 2		RATE 3		RATE 4	
		'1ST		'2ND		'1ST		'2ND	
1 QM		1019		1019		2.635		2.635	
2 TW		534		534		534		534	
3 Ts		648.0		648.0		648.0		648.0	
4 T		591.0		591.0		591.0		591.0	
PR (est)		5.82		5.62		5.46		5.29	
5 Z(est)		0.848		0.904		0.838		0.892	
6 TZ		501.1		534.0		495.4		526.9	
7 GH/TZ		16.358		15.349		16.545		15.556	
8 eS		1.847		1.778		1.860		1.792	
9 i-e-S		0.459		0.438		0.462		0.442	
10 Pt		3912.0		3912.0		3777.0		3667.0	
11 Pt2 /1000		15303.7		15303.7		14265.7		14265.7	
12 Fr		0.010763		0.010763		0.010763		0.010763	
13 Fc=FrTZ		5.393		5.748		5.332		5.671	
14 FcQm		5.50		5.86		14.05		14.94	
15 L/H(FcQm)2		30.2		34.3		197.4		223.3	
16 Fw		13.848445		15.012623		91.269379		98.703844	
17 Pw2		15317.6		15318.8		14357.0		14364.4	
18 Ps2		28288.0		27239.7		26700.1		25741.6	
19 Ps		5318.6		5219.2		5167.2		5073.6	
20 P		4615.3		4565.6		4472.1		4425.3	
21 Pr		6.87		6.79		6.65		6.59	
22 Tr		1.55		1.55		1.55		1.55	
23 Z		0.904		0.899		0.892		0.888	
=====									
								FORM C122-D	



Laboratory Services, Inc.

4016 Fiesta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline
P. O. Box 791
Hobbs, New Mexico 88241

SAMPLE:
IDENTIFICATION: Mescalero 80 #2
COMPANY: Gruy Petroleum
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 8/28/03 10:00 am
ANALYSIS DATE: 8/28/03
PRESSURE - PSIG 600
SAMPLE TEMP. °F
ATMOS. TEMP. °F 100

GAS (XX) LIQUID ()
SAMPLED BY: Glen
ANALYSIS BY: Vickie Biggs

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	0.651	
Carbon Dioxide (CO2)	0.565	
Methane (C1)	84.260	
Ethane (C2)	6.099	2.161
Propane (C3)	3.845	1.057
I-Butane (IC4)	0.581	0.190
N-Butane (NC4)	0.991	0.312
I-Pentane (IC5)	0.288	0.103
N-Pentane (NC5)	0.207	0.075
Hexane Plus (C6+)	0.518	0.225
	100.000	4.123
BTU/CU.FT. - DRY	1187	MOLECULAR WT. 19.8236
AT 14.650 DRY	1188	
AT 14.650 WET	1162	
AT 14.73 DRY	1189	
AT 14.73 WET	1169	
SPECIFIC GRAVITY - CALCULATED	0.683	
MEASURED		



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ASTM DISTILLATION

Pro Well Testing & Wireline
P. O. Box 791
Hobbs, New Mexico 88241

Sample Date:
Sampled By: Pro Well

Gruy Petroleum
Mescalero 30 Com. #2

Percent Distilled

Temperature

IBP	92
5	119
10	137
20	186
30	214
40	250
50	295
60	364
70	468
80	585
EP	647

% Recovered = 94.0
% Residue = 12.0
% Loss = 4.0

API Gravity @ 60° F = 52.4

Rolland Perry

**Laboratory Services, Inc.**

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I-Butane (IC4)	0.581	0.190
N-Butane (NC4)	0.991	0.312
I-Pentane (IC5)	0.288	0.108
N-Pentane (NC5)	0.207	0.075
Hexane Plus (C6+)	0.518	0.225
	100.000	4.123

BTU/CU.FT. - DRY 1187
AT 14.650 DRY 1183
AT 14.650 WET 1162
AT 14.73 DRY 1189
AT 14.73 WET 1169

MOLECULAR WT. 19.8236

SPECIFIC GRAVITY -
CALCULATED 0.683
MEASURED