Submit in duplicate to 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

30-025-36789

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator: PALADEN ENERGY		Lease or Unit Name: SOUTH VACUUM "35"	
Type Test: ☑ Initial ☐ Annual ☐ Special		Test Date: 1/8/2005	Well No.: 354
Completion Date	Total Depth	Plug Back TD	Elevation / Unit Ltr - Sec - TWP - Rge
Csg. Size: — / Wt.: — / d: 4.892 / Set At: —	Perforations: From: 13506 To: 13630		County: LEA
Tbg. Size: 2.375/2.875 / Wt.: 4.7/6.5 / d: .995/2.44 / Set At: 13414	Perforations: From: To:		Pool: Vacuum South
Type Well-Single-Bradenhead-G.G. or G.O. Multiple: SINGLE	Packer Set At: 13414		Formation: McKee
Producing Thru: TUBING	Reservoir Temp.: 181	Mean Annual Temp.: 60	Baro. Press.-P_a: 13.2	Connection: SALES

L	H	Gg	%CO_2	%N_2	%H_2S	Prover	Meter Run	Taps
13414	13414	0.65	0.401	8.659	N/A	N/A	3.068	FLG

	FLOW DATA				TUBING DATA		CASING DATA		
No.	Prover Line Size x Orifice Size	Press p.s.i.g.	Diff. h_w	Temp.	Press p.s.i.g.	Temp.	Press p.s.i.g.	Temp.	Duration of Flow
SI					3194		PKR		
1	3.068 X 1.500	425	0.8	41	3152		"		1 HR
2	3.068 X 1.500	428	6.9	21	2792				1 HR
3	3.068 X 1.500	429	12.6	26	2526				1 HR
4	3.068 X 1.500	437	26.4	45	2243				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							317
2							784
3	TOTAL	FLOW	METER				1,170
4							1,516
5							

No.	P_r	Temp. R	T_r	Z
1				
2	TOTAL	FLOW	METER	
3				
4				
5				

Gas Liquid Hydrocarbon Ratio	DRY GAS		Mcf bbl.
A.P. I. Gravity of Liquid Hydrocarbons	DRY		Deg.
Specific Gravity Separator Gas	0.65		XXXXXXX
Specific Gravity Flowing Fluid	XXXXX		N/A
Critical Pressure	660 P.S.I.A.	N/A	P.S.I.A.
Critical Temperature	352 R.	N/A	R

P_c 3399.5 P_c^2 11556.6

No.	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		3345.3	11191	365.6
2		3286.7	10802.4	754.2
3		3224.1	10394.8	1161.8
4		3122.2	9748.1	1808.5
5				

(1) $\dfrac{P_c^2}{P_c^2 - P_w^2} =$ 6.4 (2) $\left[\dfrac{P_c^2}{P_c^2 - P_w^2}\right]^n =$ 6.4

AOF = Q $\left[\dfrac{P_c^2}{P_c^2 - P_w^2}\right]^n =$ 9702.4

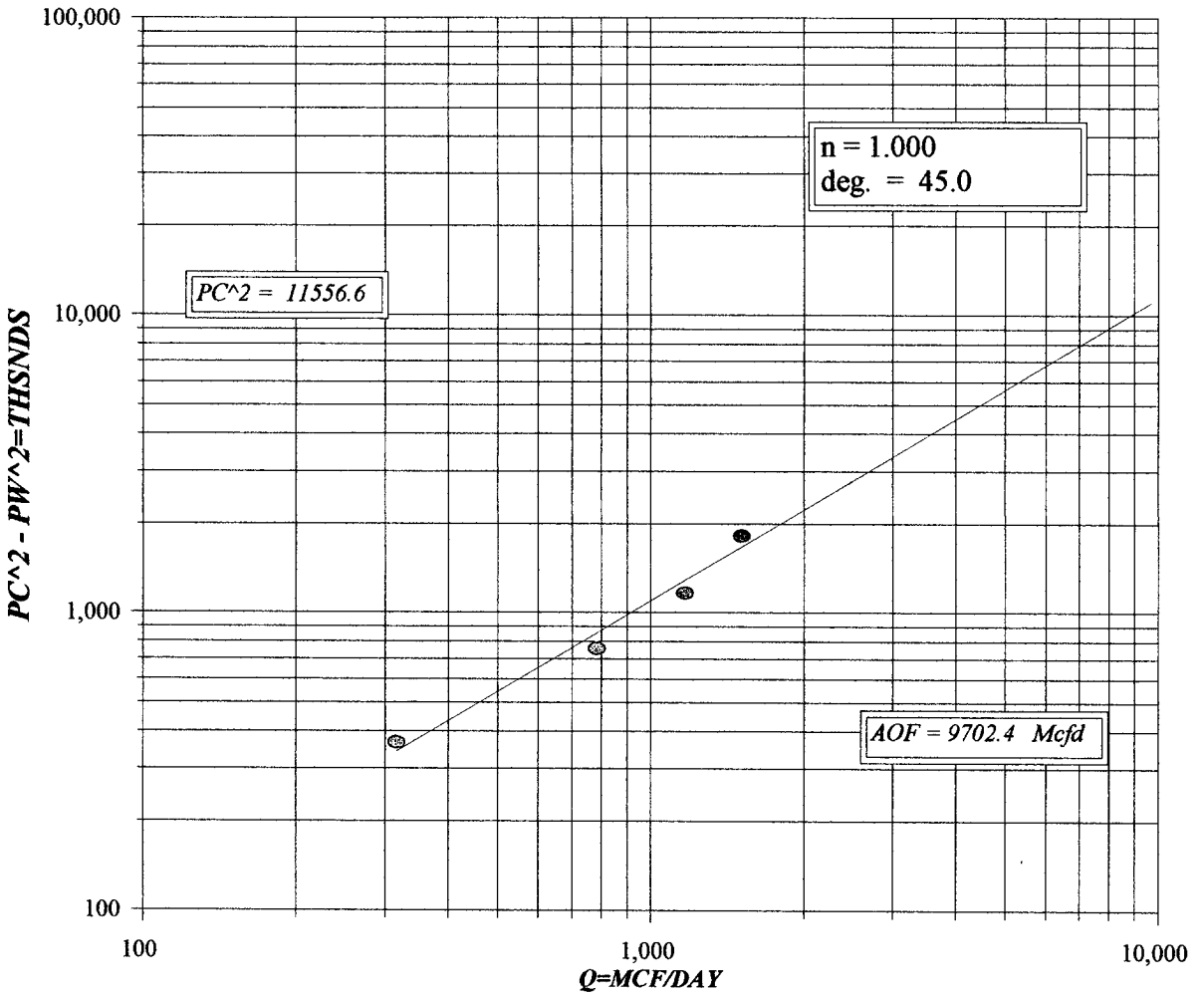
Absolute Open Flow	9,702	Mcfd @ 15.025	Angle of Slope θ: 45	Slope, n: ,1.000

Remarks: NO LIQUID MADE DURING TEST.

Approved By Division:	Conducted By:	Calculated By:	Checked By:
	PRO WELL TESTING	MERV BUECKER	BM

PALADIN ENERGY

SOUTH VACUUM "35" #4



Laboratory Services, Inc.
2609 West Marland
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

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

SAMPLE:
IDENTIFICATION S. Vacuum 35 #4
COMPANY: Paladin Energy
LEASE:
PLANT:

SAMPLE DATA:
DATE SAMPLED 1/8/05
ANALYSIS DATE: 1/10/05
PRESSURE – PSIG 426
SAMPLE TEMP. °F 26
ATMOS. TEMP. °F

GAS (XX) LIQUID ( )
SAMPLED BY: Ben Pena / Pro Well
ANALYSIS BY: Vickie Biggs

REMARKS: Sample taken at meter run
McKee formation

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM
Hydrogen Sulfide	(H2S)		
Nitrogen	(N2)	8.659	
Carbon Dioxide	(CO2)	0.401	
Methane	(C1)	84.042	
Ethane	(C2)	4.497	1.200
Propane	(C3)	1.172	0.322
I-Butane	(IC4)	0.240	0.078
N-Butane	(NC4)	0.334	0.105
I-Pentane	(IC5)	0.128	0.047
N-Pentane	(NC5)	0.094	0.034
Hexane Plus	(C6+)	0.433	0.188
		100.000	1.974

BTU/CU.FT. – DRY	1006
AT 14.650 DRY	1003
AT 14.650 WET	985
AT 14.73 DRY	1008
AT 14.73 WET	991

MOLECULAR WT. 18.8456

SPECIFIC GRAVITY –
CALCULATED
MEASURED 0.650