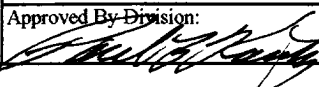


Submit in duplicate to
appropriate district office.
See Rule 401 & Rule 1122

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

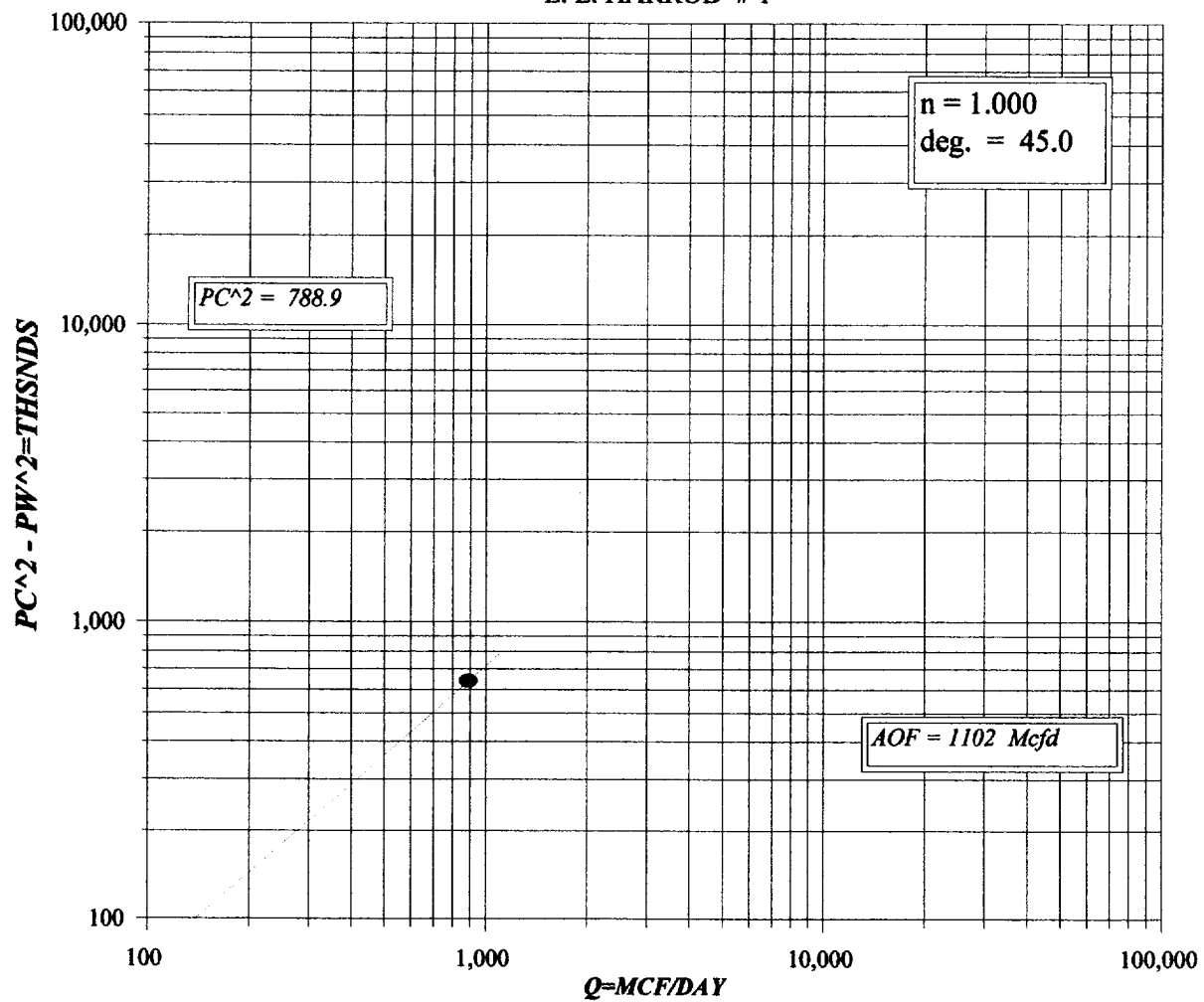
Form C-122
Revised October, 1999

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator NADEL & GUSSMAN PERMAIN					Lease or Unit Name E.L. HARROD				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 8/23/01		Well No. 1		
Completion Date		Total Depth 13200		Plug Back TD 13165		Elevation 4052 GL		Unit Ltr - Sec - TWP - Rge U 5 16S 35E	
Csg. Size 5 1/2	Wt. 17	d 4.892	Set At 13200	Perforations: From: 12586 To: 12618			County LEA		
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 12508	Perforations: From: To:			Pool		
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 12508			Formation ATOKA		
Producing Thru TUBING		Reservoir Temp. °F 199.1		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		Connection SALES	
L 12508	H 12508	Gg 0.685	%CO ₂ 4.559	%N ₂ 2.182	%H ₂ S N/A	Prover N/A	Meter Run 2.067	Taps FLG	
FLOW DATA					TUBING DATA			CASING 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	Press p.s.i.g.	Temp. °F
SI						875	N/A	PKR	N/A
1	2.067 X 1.000		320	58	68	360			
2									
3									
4									
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								890	
2									
3	TOTAL		FLOW	METER					
4									
5									
No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 445 Mcf bbl.				
1					A.P. I. Gravity of Liquid Hydrocarbons 56 Deg.				
2					Specific Gravity Separator Gas 0.685 XXXXXXXX				
3	TOTAL	FLOW			Specific Gravity Flowing Fluid XXXXXX G. MIX = .692				
4					Critical Pressure 672 P.S.I.A. 672 P.S.I.A.				
5					Critical Temperature 371 R. 384 R				
P _c 888.2 P _{c2} 788.9					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.238$ AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.102$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.238$				
No.	P _t ²	P _w	P _w ²	P _c ² - P _w ²					
1	139.3	399.2	151.5	637.4					
2									
3									
Absolute Open Flow 1.102 Mcfd @ 15.025 Angle of Slope (°): 45 Slope n: 1									
Remarks: * WELL MADE 2 BBLS OF 56 API GRAVITY CONDENSATE DURING TEST.									
Approved By Division: 			Conducted By: PRO WELL TESTING		Calculated By: MERV BUECKER			Checked By: BM	

NADEL & GUSSMAN PERMAIN

E. L. HARROD # 1



COMPANY :NADEL & GUSSMAN PERM LEASE : L HARROD WELL NO. : 1
UNIT :U SECTION : 5 TOWNSHIP :16S
L : 12508 H : 12508 L/H : 1 G/GMIX : 0.685
%CO2 : %N2 : H2S : DATE :
d : 2.441 Fr :0.010763 GH : 8568.0 RANGE :35E

VOL 1 : 890 PSIA 1 : 373.2 RESV.TEMP 199.1
VOL 2 : PSIA 2 :
VOL 3 : PSIA 3 : SHUT-IN PR= 888.2
VOL 4 : PSIA 4 :

PCR : 672
TCR : 384

LINE	RATE 1		RATE 2		RATE 3		RATE 4	
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1 QM	0.890	0.890	0.000	0.000	0.000	0.000	0.000	0.000
2 TW	534	534	534	534	534	534	534	534
3 Ts	659.1	659.1	659.1	659.1	659.1	659.1	659.1	659.1
4 T	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5
PR (est)	0.56		0.00		0.00		0.00	
5 Z(est)	0.928	0.919	ERR	ERR	ERR	ERR	ERR	ERR
6 TZ	553.6	548.1	ERR	ERR	ERR	ERR	ERR	ERR
7 GH/TZ	15.478	15.631	ERR	ERR	ERR	ERR	ERR	ERR
8 eS	1.787	1.797	ERR	ERR	ERR	ERR	ERR	ERR
9 l-e-S	0.440	0.444	ERR	ERR	ERR	ERR	ERR	ERR
10 Pt	373.2	373.2	0.0	0.0	0.0	0.0	0.0	0.0
11 Pt2 /1000	139.3	139.3	0.0	0.0	0.0	0.0	0.0	0.0
12 Fr	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.0107631
13 Fc=FrTZ	5.958	5.900	ERR	ERR	ERR	ERR	ERR	ERR
14 FcQm	5.30	5.25	ERR	ERR	ERR	ERR	ERR	ERR
15 L/H(FcQm)	28.1	27.6	ERR	ERR	ERR	ERR	ERR	ERR
16 Fw	12.38179	12.22811	ERR	ERR	ERR	ERR	ERR	ERR
17 Pw2	151.7	151.5	ERR	ERR	ERR	ERR	ERR	ERR
18 Ps2	271.0	272.3	ERR	ERR	ERR	ERR	ERR	ERR
19 Ps	520.6	521.8	ERR	ERR	ERR	ERR	ERR	ERR
20 P	446.9	447.5	ERR	ERR	ERR	ERR	ERR	ERR
21 Pr	0.66	0.67	ERR	ERR	ERR	ERR	ERR	ERR
22 Tr	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
23 Z	0.919	0.919	ERR	ERR	ERR	ERR	ERR	ERR

Pc = 888.2 Pc2 = 788.9 *
Pt2 = 139.3 Pw = 389.2 *
0.0 ERR *
0.0 ERR *
0.0 ERR *

Pc2-Pw2= 637.4 Pw2 = 151.5 *
ERR ERR *
ERR ERR *
ERR ERR *

n = 1.000 *

Pc2/(Pc2-Pw2) = 1.238 *
ERR *
ERR *
ERR *

[Pc2/Pc2-Pw2]n = 1.238 *
ERR *
ERR *

AOF= Q 1.102 *
ERR *
ERR *

FORM C122-D *

NEW MEXICO G.O.R./G. MIX

NO. OF BBLs PRODUCED = 2.0

API GRAVITY @ 60 DEG. = 56.0

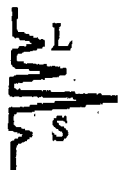
.....
SPECIFIC GRAVITY OF GAS = 0.6850

XX

TOTAL GAS PRODUCED = 890

G.O.R. = 445.000

G.MIX = 0.692

**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: E. L. Harrod #1
COMPANY: Nadel & Gussman Permian
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 8/22/01
ANALYSIS DATE: 8/24/01
PRESSURE - PSIG 360
SAMPLE TEMP. °F
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Merv Buscker
ANALYSIS BY: Vickie Biggs

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	2.186	
Carbon Dioxide (CO2)	4.559	
Methane (C1)	83.052	
Ethane (C2)	6.492	1.782
Propane (C3)	2.928	0.640
I-Butane (IC4)	0.818	0.104
N-Butane (NC4)	0.544	0.171
I-Pentane (IC5)	0.165	0.060
N-Pentane (NC5)	0.184	0.048
Hexane Plus (C6+)	0.222	0.096
	100.000	2.851

BTU/CU.FT. - DRY 1063
AT 14.650 DRY 1060
AT 14.650 WET 1041
AT 14.73 DRY 1065
AT 14.73 WET 1047

MOLECULAR WT. 19.8411

SPECIFIC GRAVITY -
CALCULATED 0.685
MEASURED

JUN 21 2001



PATTERSON DRILLING COMPANY LP

A LIMITED PARTNERSHIP

410 North Loraine Street • Midland, Texas 79701

(915) 682-9401 • Fax (915) 682-1565

June 19, 2001

Nadel and Gussman Permian LLC
601 N. Marienfeld, Ste. 508
Midland, TX 79701

Re: Deviation Report
E. L. Harrod #1
Sec. 5, T-16-S, R-35-E

Gentlemen:

The following is a deviation survey on the above-referenced well located in Lea County, New Mexico.

409' - 0.50	3458' - 0.75	6885' - 0.75	10411' - 0.50
800' - 1.00	3806' - 1.25	7260' - 0.75	10800' - 1.00
1205' - 0.75	4101' - 0.75	7671' - 0.75	11188' - 1.00
1615' - 1.00	4543' - 1.00	8211' - 1.00	11593' - 0.75
2009' - 1.75	4929' - 0.75	8464' - 0.50	12093' - 0.75
2165' - 1.50	5324' - 0.75	8877' - 1.00	12637' - 1.75
2607' - 1.00	5709' - 0.50	9226' - 0.75	13200' - 2.00
2892' - 1.25	6050' - 0.75	9626' - 0.75	
3176' - 1.00	6509' - 0.50	10031' - 1.00	

Sincerely,

Treva Forrester
Treva Forrester

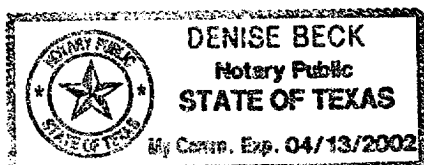
STATE OF TEXAS)
)
COUNTY OF MIDLAND)

The foregoing was acknowledged before me this 19th day of June, 2001 by Treva Forrester.

MY COMMISSION EXPIRES:

Denise Beck

NOTARY PUBLIC



NADEL AND GUSSMAN PERMIAN

E.L. HARROD #1

660' FSL, 660' FWL, Unit U, Sec 5, 16S, 35E, Lea County, NM

API # 30 - 025 - 35364

Elev: 4052', KB = 4070'

Current Status - Flowing

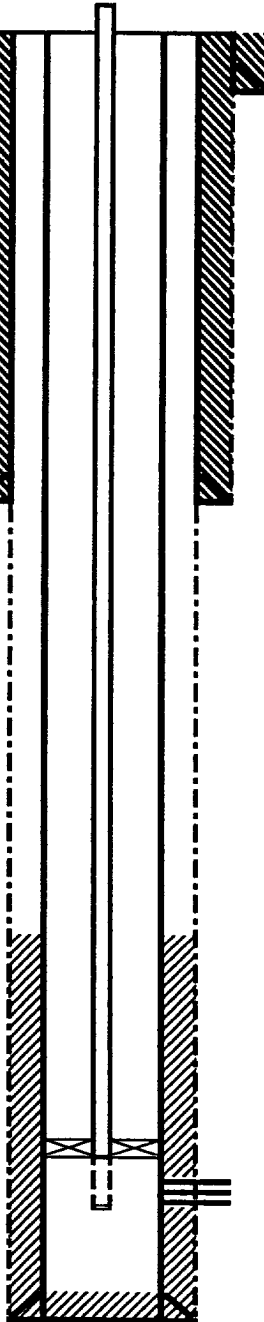
13-3/8", 48#, H-40 @ 409'
435 sx, cement circulated
17-1/2" hole

9-5/8", 40#, J-55 @ 4543'
1435 sx, cement circulated
12-1/4" hole

5-1/2", 17#, NS80 & SP110 @ 13,200'
1020 sx, TOC @ 9630', calc 75%
8-3/4" hole

SP-110 casing:
TD - 9,875'
1,914' - surface

FC @ 13,155'



Arrowset 1-X 10-K packer @ 12,508'

2.25" ID "F" nipple in on/off tool

Atoka perms: 12,586' - 12,618'

@ 4 SPF, 32' - 128 holes

56,510 gal 70Q Binary foam; 61,180# interprop

116 tons CO₂, 560 mscf N₂

PBTD @ 13,165'

TD @ 13,200'