

JUL-14-2003 09:19 AM PROWELLTESTING

505 592 508

P. 02

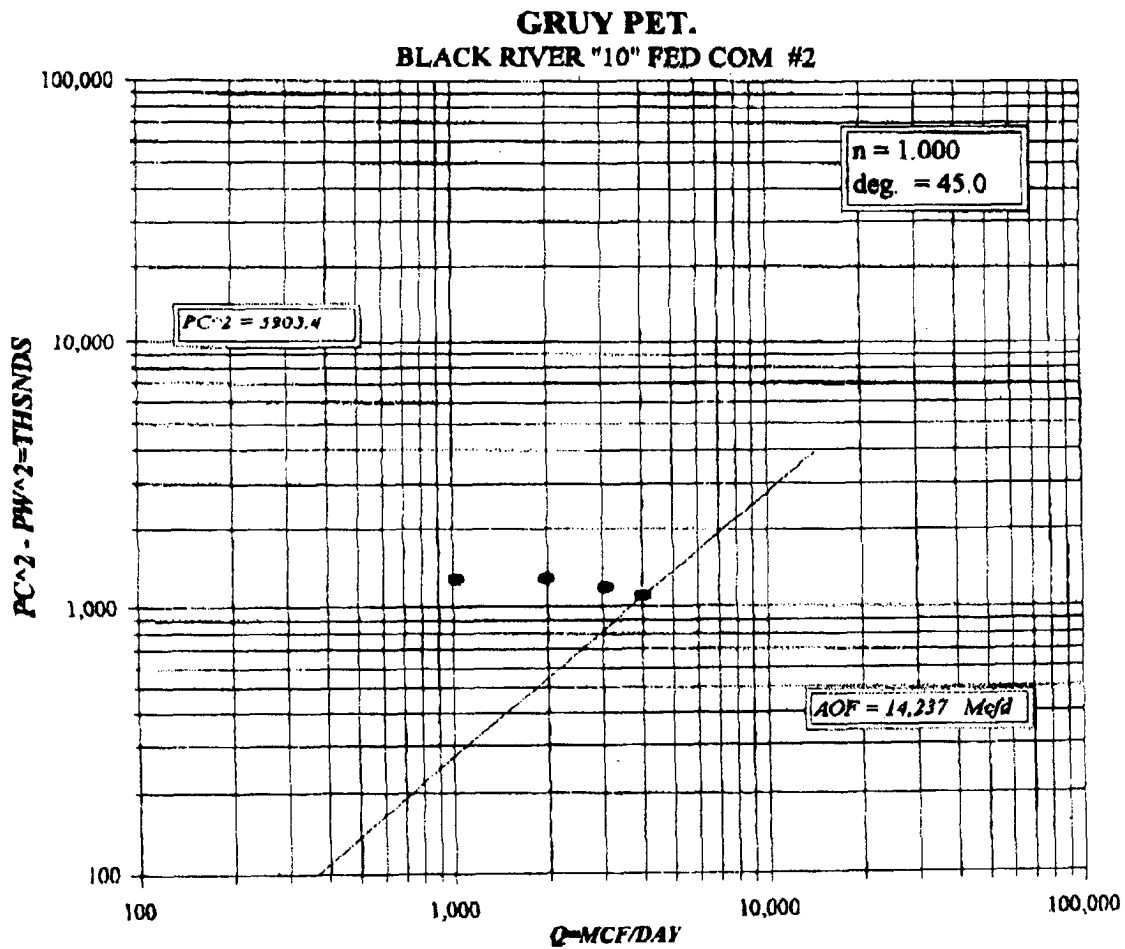
Submit in duplicate to
appropriate district office.
See Rule 401 & Rule 1122

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 WELLS

Operator GRUY PET MANAGEMENT CO.				Lease or Unit Name BLACK RIVER "10" FED COM			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 7/11/03		Well No. 2	
Completion Date 6/27/03		Total Depth 11968		Plug Back TD 11520		Elevation 3340 GL	
Csg. Size 5 1/2		Set At 11968		Perforations From: 11122 To: 11484		County EDDY	
Tbg. Size 2 3/8		Set At 11239		Perforations From: To:		Pool <i>South Carlsbad Mar</i>	
Type Well-Single-Bradford-G.O. or G.O. Multiple SINGLE				Packer Set At 11239		Formation MORROW	
Producing thru Tubing		Reservoir Temp. °F 185		Mean Annual Temp. °F 60		Baro. Press. -P _s 13.2	
L 11239		H 112369		Og 0.587		Type FLG	
				%CO ₂ 1.463			
				%N ₂ 0.601			
				%H ₂ S N/A			
				Prover N/A			
				Meter Run 4.026			
FLOW 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
1	4.026 X 2.375		211	3.4	76	1594	
2	4.026 X 2.375		224	12.3	91	1557	
3	4.026 X 2.375		236	26.9	67	1521	
4	4.026 X 2.375		246	44	66	1461	
5							
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
1	4.026 X 2.375		211	3.4	76	1594	
2	4.026 X 2.375		224	12.3	91	1557	
3	4.026 X 2.375		236	26.9	67	1521	
4	4.026 X 2.375		246	44	66	1461	
5							
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
1	4.026 X 2.375		211	3.4	76	1594	
2	4.026 X 2.375		224	12.3	91	1557	
3	4.026 X 2.375		236	26.9	67	1521	
4	4.026 X 2.375		246	44	66	1461	
5							
RATE OF FLOW CALCULATIONS							
No.	COEFFICIENT (24 Hour)	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress Factor F _{pv}	Rate of Flow Q, Mcfd	
1						1033	
2						1988	
3	TOTAL	FLOW	METER			3075	
4						4040	
5							
No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio N/A Mcf/bbl.		
1					A.P. I. Gravity of Liquid Hydrocarbons N/A Deg.		
2	TOTAL	FLOW	METER		Specific Gravity Separator Gas 0.587 XXXXXXXX		
3					Specific Gravity Flowing Fluid N/A XXXXXX		
4					Critical Pressure 675 P.S.I.A. P.S.I.A.		
5					Critical Temperature 346 R. R.		
P _c	1978.2	P _w	3905.4				
No.	P _c ²	P _w ²	P _c ² - P _w ²				
1		1619.8	2623.8	1281.6			
2		1617.6	2616.5	1288.9			
3		1647.7	2715	1190.4			
4		1672.5	2797.2	1108.2			
5							
				$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 3.524 \quad (2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.524$			
				$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 14,237$			
Absolute Open Flow				14,237	Mcf/d @ 15.025	Angle of Slope (°):	45
Slope n:				1			
Remarks: * NO LIQUID MADE DURING TEST.							
Approved By Division:		Conducted By: PRO WELL TESTING		Calculated By: MERV BUECKER		Checked By: MB	



C1220 FORM IMPORTED FROM SYMPHONY ON 9-9-01

COMPANY : GRUB PET. MANAGEMENT CO.		LEASE : BLACK RIVER 10 FED CORRL NO.		10		Pe = 1976.2		Pc2 = 3005.4			
UNIT : N	11239	SECTION : 10	TOWNSHIP : 246	DATE : 01/06/00		Pw = 1619.9					
LOC2 : 1.463	SN2 : 0.601	L/H : 1	Q/OMIX : 0.507	RANGE : 80E		Pc2/Pw2 = 1617.8					
d : 1.008	FT : 0.016100	OM : 0197.0			2383.8		1647.7				
						2177.3		1672.3			
VOL 1 : 1033		PSIA 1 : 1807.2	RECV. TEMP : 188.0		Pc2-Pw2 = 1261.6		Pw2 = 8823.8				
VOL 2 : 1898		PSIA 2 : 1870.2	SHUT-IN PRESS : 1976.2		1888.0		8418.8				
VOL 3 : 3076		PSIA 3 : 1884.2			1190.4		2718.0				
VOL 4 : 4040		PSIA 4 : 1474.2			1108.2		2797.2				
		PCR : 478			n = 1.000						
		TCR : 346			Pc2/(Pc2-Pw2) = 3.047		8.030				
LINE	RATE 1	RATE 2	RATE 3	RATE 4							
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND			
1 OM	1033	1033	1033	1033	9076	9076	4040	4040			
2 TW	594	594	594	594	594	594	594	594			
3 Ys	648.0	648.0	648.0	648.0	648.0	648.0	648.0	648.0			
4 T	591.0	591.0	591.0	591.0	591.0	591.0	591.0	591.0			
5 P0 (est)	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39			
6 Z (est)	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850			
7 Z	307.6	307.6	307.6	307.6	307.6	307.6	307.6	307.6			
8 GH/TZ	16.142	16.142	16.142	16.142	16.142	16.142	16.142	16.142			
9 ad	1.892	1.844	1.830	1.843	1.828	1.849	1.825	1.843			
10 Lo-S	0.454	0.458	0.454	0.458	0.452	0.458	0.452	0.457			
11 P1	1807.2	1807.2	1370.2	1570.2	1524.2	1634.2	1474.2	1474.2			
12 P12 /1000	3583.1	2689.1	2486.6	2486.6	2383.8	2383.8	2173.3	2173.3			
13 P1	0.018188	0.018188	0.018183	0.018183	0.018183	0.018183	0.018183	0.018183			
14 FwP-12	9.233	8.133	9.240	9.190	9.288	9.338	9.225	9.142			
15 FwQm	9.54	8.43	18.39	10.17	28.49	29.10	57.55	30.98			
16 L/H(FwQm)2	91.0	89.0	338.1	330.1	811.8	789.6	1410.1	1364.8			
17 Fw	41.312043	40.743765	159.94579	151.01323	267.71192	361.26817	637.23657	823.899620			
18 Pw2	2624.4	2622.8	3618.8	3616.5	2721.5	2716.6	2810.6	2787.2			
19 Pc	4907.5	4838.4	4792.9	4828.2	4574.8	5009.0	5127.9	5188.2			
20 P	2192.8	2199.4	2189.1	2186.2	2230.4	2237.2	2204.3	2170.3			
21 Pr	1899.9	1809.4	1979.7	1883.2	1882.3	1885.7	1869.3	1872.4			
22 Tr	2.81	2.82	2.78	2.79	2.79	2.78	2.77	2.77			
23 Z	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71			
24 Z	0.850	0.850	0.850	0.850	0.850	0.850	0.851	0.851			

FORM C1220

JUL-14-2003 09:20 AM PROWELLTESTING

5053920508

P. 04

**Laboratory Services, Inc.**4018 Fleets Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR:Pro Well Testing & Wireline
P. O. Box 791
Hobbs, New Mexico 88241**SAMPLE:**IDENTIFICATION: Black River 10 #2
COMPANY: Gruy Petroleum
LEASE:
PLANT:**SAMPLE DATA:** DATE SAMPLED: 7/11/03 12:00 pm

ANALYSIS DATE: 7/11/03

PRESSURE - PSIG 250

SAMPLE TEMP. °F 77

ATMOS. TEMP. °F

GAS (XX) LIQUID ()

SAMPLED BY: J. Rice

ANALYSIS BY: Vickie Biggs

REMARKS:**COMPONENT ANALYSIS**

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	0.601	
Carbon Dioxide (CO2)	1.463	
Methane (C1)	93.524	
Ethane (C2)	1.919	0.512
Propane (C3)	0.253	0.070
I-Butane (IC4)	0.036	0.012
N-Butane (NC4)	0.036	0.011
I-Pentane (IC5)	0.020	0.007
N-Pentane (NC5)	0.018	0.005
Hexane Plus (C6+)	0.138	0.038
	100.000	0.575

BTU/CU.FT. - DRY 1016
 AT 14.650 DRY 1019
 AT 14.650 WET 994
 AT 14.73 DRY 1019
 AT 14.73 WET 1000

MOLECULAR WT. 17.0180

SPECIFIC GRAVITY -
 CALCULATED 0.587
 MEASURED