

30-025-36265

Operator SAGA PETROLEUM				Lease or Unit Name BOOTLEG 11 FEDERAL COM			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 2-11-04		Well No. 1	
Completion Date 10-23-2003		Total Depth 15,160		Plug Back TD		Elevation Gr 3700'	
Unit Ltr - Sec - TWP - Rge J 11 22 32		County LEA		Pool Bootleg Ridge, Morrow			
Csg. Size 7"	Wt 26#	d 12,195	Set At 11702	Perforations: From: 14602 To: 14672			
Tbg. Size 2 7/8	Wt 6.5	d *2.542	Set At 11702	Perforations: From: To:			
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 11739		Formation MORROW	
Producing Thru TBG		Reservoir Temp. °F 198 @ 14602		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
Connection SALES							
L 14602	H 14602	Gg 0.638	%CO ₂ 0.916	%N ₂ 0.347	%H ₂ S N/A	Prover N/A	Meter Run 3.068
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
SI							
1	3 X	1.500	67	14.7	71	2310	PKR
2	3 X	1.500	60	63	76	2130	"
3	3 X	1.500	60	147.2	83	1860	"
4	3 X	1.500	58	210.8	80	1713	"
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							
2							
3	MEASURED		BY		TOTAL		FLOW
4							
5							
No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 65.333 Mcf bbl.		
1					A.P.I. Gravity of Liquid Hydrocarbons 46.0 @ 60 Deg.		
2					Specific Gravity Separator Gas 0.638 XXXXXXXX		
3		N/A			Specific Gravity Flowing Fluid XXXXX GMEK = 687		
4					Critical Pressure 670 P.S.I.A. 2223669 P.S.I.A.		
5					Critical Temperature 368 R 2223669 385		
P _c 2443.2		P _w 5969.2					
No.	P _c ²	P _w	P _w ²	P _c ² - P _w ²	(1) $P_c^2 =$ 2.02 (2) $\left[\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2} \right]^n =$		
1		2323.8	5400.1	569.1			
2		2145.7	4604	1365.2			
3		1879.8	3533.7	2435.1			
4		1736.1	3013.9	2955.3			
5							
Absolute Open Flow 2.970		Mcf/d @ 15.025		Angle of Slope (°): 52.8		Slope n: 0.7572	
Remarks: Well produced 3.0 bbls 46.0 API Gr condensate * = Equivalent diameter program							
Approved By Division: <i>[Signature]</i>		Conducted By: METERING & TESTING		Calculated By: BM		Checked By: BM	

02/20/2004 10:25 15053970990 METERING & TESTING PAGE 02

0 COMPANY : SAGA PETROLEUM LEASE : BOOT LEG 11 PED. WELL NO. : 1 Pc = 2443.2 Pc2 = 5969.2 *

UNIT : SECTION : 11 TOWNSHIP : 22

L : 14602 H : 14602 L/R : 1 G/GMIX : 0.687 Pt2 = 5397.3 Pw = 2323.8 *

%CO2 : 0.916 %N2 : 0.347 H2S : DATE : 2-11-04 4593.3 2145.7 *

d : 2.542 Pr : 0.009681 GH : 10031.6 RANGE : 32 3508.9 1879.8 *

2979.8 1736.1 *

VOL 1 : 499 PSIA 1 : 2323.2 RESV.TEMP 198.0 Pc2-Pw2= 569.1 Pw2 = 5400.1 *

VOL 2 : 974 PSIA 2 : 2143.2 1365.2 4604.0 *

VOL 3 : 1487 PSIA 3 : 1873.2 SHUT-IN PR= 2443.2 2435.6 3533.7 *

VOL 4 : 1744 PSIA 4 : 1726.2 2955.3 3013.9 *

PCR : 669
TCR : 385

LINE	RATE 1		RATE 2		RATE 3		RATE 4	
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1 QM	0.499	0.499	0.974	0.974	1.487	1.487	1.744	1.744
2 TW	534	534	534	534	534	534	534	534
3 Ts	658.0	658.0	658.0	658.0	658.0	658.0	658.0	658.0
4 T	596.0	596.0	596.0	596.0	596.0	596.0	596.0	596.0
PR (est)	3.47		3.20		2.80		2.58	
5 X(est)	0.779	0.790	0.780	0.783	0.787	0.779	0.794	0.780
6 TZ	464.0	470.7	464.9	466.6	469.3	464.0	473.3	464.8
7 GH/TZ	21.620	21.312	21.579	21.501	21.375	21.620	21.193	21.584
8 es	2.250	2.224	2.246	2.240	2.229	2.250	2.214	2.247
9 l-e-S	0.555	0.550	0.555	0.553	0.551	0.555	0.548	0.555
10 Pt	2323.2	2323.2	2143.2	2143.2	1873.2	1873.2	1726.2	1726.2
11 Pt2 /1000	5397.3	5397.3	4593.3	4593.3	3508.9	3508.9	2979.8	2979.8
12 Pr	0.009681	0.009681	0.009681	0.009681	0.009681	0.009681	0.009681	0.009681
13 Fc-FrtZ	4.492	4.557	4.501	4.517	4.544	4.492	4.583	4.500
14 FcQM	2.24	2.27	4.38	4.40	6.76	6.68	7.99	7.85
15 L/R(FcQM)	5.0	5.2	19.2	19.4	45.6	44.6	63.9	61.6
16 Pw	2.791165	2.845774	10.66163	10.71371	25.16991	24.78575	35.02337	34.171609
17 Pw2	5400.0	5400.1	4604.0	4604.0	3534.0	3533.7	3014.8	3013.9
18 Ps2	12147.9	12008.4	10941.0	10311.1	7877.5	7949.4	6674.3	6770.9
19 Ps	3485.4	3465.3	3215.7	3211.1	2806.7	2819.5	2583.5	2602.1
20 P	2904.3	2894.3	2679.5	2677.1	2339.9	2346.3	2154.8	2164.1
21 Pr	4.34	4.33	4.01	4.00	3.50	3.51	3.22	3.23
22 Tr	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
23 Z	0.790	0.789	0.783	0.783	0.779	0.779	0.780	0.780

Pc2/(Pc2-Pw2) = 10.488
4.372
2.451
2.020

[Pc2/Pc2-Pw2]n = 5.928
3.056
1.971
1.703

ADP= Q 2.958
2.977
2.932
2.970

FORM C122-D

