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appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator SANTA FE ENERGY						Lease or Unit Name HB '11' ST. COM					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 2-26-96		Well No. 1			
Completion Date 2-23-96		Total Depth 14006		Plug Back TD 13902		Elevation		Unit Ltr. - Sec. - TWP - Rge. 11-24S-29E			
Csg. Size 4 1/2	Wt. 13.5	d 3.920	Set At 14006	Perforations: From: 13548 To: 13554				County EDDY			
Tbg. Size 2-3/8	Wt. 4.7	d 1.995	Set At 13256	Perforations: From: To:				Pool			
Type Well - Single - Bradenhead - G.G. or L.O. Multiple single						Packer Set At 13256		Formation MORROW			
Producing Thru TBG		Reservoir Temp. °F 190		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection AIR			
L 13256	II 13256	Gg .590	% CO ₂ 1.18	% N ₂ .21	% H ₂ S -0-	Prover -0-	Meter Run 4.026	Taps FLG.			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice 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										
1.	4.026 x	1.250	500.0	4	56	2103.2				
2.	4.026 x	1.250	400.0	16	50	1793.2	76°	PKR.		60 min
3.	4.026 x	1.250	570.0	22	50	1683.2	78°	"		60 min
4.	4.026 x	1.250	500.0	35	60	1300.2	76°	"		60 min
5.						1093.2	76°	"		60 min

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	7.469	45.307	513.2	1.004	1.302	1.043	461
2.	7.469	86.088	463.2	1.010	1.302	1.040	879
3.	7.469	113.271	583.2	1.010	1.302	1.049	1167
4.	7.469	134.022	513.2	1.000	1.302	1.043	1359
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	N/A	Mcf/bbl
1.	.760	516	1.474	.919	A.P. L. Gravity of Liquid Hydrocarbons	N/A	
2.	.675	510	1.457	.924	Specific Gravity Separator Gas	.590	Deg.
3.	.864	510	1.457	.908	Specific Gravity Flowing Fluid	N/A	XXXXXXXXXX
4.	.760	520	1.485	.920	Critical Pressure	675	PSIA.
5.					Critical Temperature	350	R

P_c 2146.2 P_c 4606.2

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		1857.6	3450.7	1155.5
2.		1761.1	3101.5	1504.7
3.		1436.3	2063.0	2543.2
4.		1241.5	1541.3	3064.9
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.502$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.502$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2042$

Absolute Open Flow 2042 Mcfd @ 15.025		Angle of Slope θ 45	Slope, n 1.000
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Remarks: **NO FLUID MADE DURING TEST**

*** BHP INSTRUMENTS SET @ THIS DEPTH**

Approved By Division	Conducted By: PRO WELL TESTING	Calculated By: MB	Checked By: BM
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