NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT BACK PRESSURE TEST FOR GAS WELL

4/SF File

Form C-122
Revised 9-1-65

RECEIVED
SEP 29 1982
O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special — Test Date: 7-24-82

Company: MESA PETROLEUM CO.	Connection: UNCONNECTED		Unit: L
Pool: PECOS SLOPE ABO	Formation: ABO		
Completion Date: 7-24-82	Total Depth: 3116'	Plug Back TD: 3044'	Elevation: 4112'
Farm or Lease Name: MACHO FED COM			
Csg. Size: 4 1/2" Wt.: 10.5# d: Set At: 3104'	Perforations: From 2832' To 2961'		Well No.: 11
Tbg. Size: 2 3/8" Wt.: 4.7# d: Set At: 2895'	Perforations: From OPEN ENDED To		Unit: N Sec.: 7 Twp.: 7S Rge.: 23E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE	Packer Set At: NONE		County: CHAVES
Producing Thru: TUBING	Reservoir Temp. °F: 95° @ 3100'	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2
			State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
		.65	1	1		2" CRITICAL FLOW PROVER		

FLOW DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA Press. p.s.i.g.	TUBING DATA Temp. °F	CASING DATA Press. p.s.i.g.	CASING DATA Temp. °F	Duration of Flow
SI							865		865		72 HRS SI
1.	2"	x	1"	27		38	835	84	845		1 HR
2.	2"	x	1"	58		42	755	85	815		1 HR
3.	2"	x	1"	82		48	620	86	720		1 HR
4.	2"	x	1"	100		52	500	86	620		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 Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	17.09	FLOW PROVER	40	1.022	1.24		866
2	17.09	FLOW PROVER	71	1.018	1.24		1531
3	17.09	FLOW PROVER	95	1.012	1.24		2037
4	17.09	FLOW PROVER	113	1.008	1.24		2413
5							

NO.	P_t	Temp. °R	T_r	Z
1.				
2.				
3.				
4.				
5.				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas _____ XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX _____
Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
Critical Temperature _____ R _____ R

P_c 878 P_c^2 771

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		858	736	35
2		828	686	85
3		733	537	234
4		633	401	370
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.0837$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.4435$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3,500$

Posted FD-2 10-1-82 Comp & BK

Absolute Open Flow 3,500 Mcfd @ 15.025 Angle of Slope θ 63.5° Slope, n .5

Remarks: Plot of $Pc^2 - Pw^2$ vs Q yield a straight line with a θ greater than 63.5°. Drew 63.5° line through highest point.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	JAMES CRAIG	E.L. BUTTROSS, JR 8-2-82	