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C-55

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 9-1-65

JUL 17 1980

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

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JUN 16 1980
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special | Test Date: 5-30-80

Company: Southland Royalty Company	Connection: None	Unit:	
Pool: ~~Undesignated~~ Wildcat Upper Penn	Formation: ~~Morrow~~ Upper Penn		
Completion Date: 5-24-80	Total Depth: 10,510'	Plug Back TD: 8200'	Elevation: 3392' Gr.
Farm or Lease Name: Pecos River Fed "20"			
Csg. Size: 4.5" / Wt.: 11.6# / d: 4.000 / Set At: 10,270'	Perforations: From 8186' To 8190'	Well No.: 1	
Tbg. Size: 2.375" / Wt.: 4.7# / d: 1.995 / Set At: 8140'	Perforations: From 0 To 0	Unit: J / Sec.: 20 / Twp.: 19 / Rge.: 27	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 8140'	County: Eddy	
Producing Thru: Tbg	Reservoir Temp. °F: 130 @ 8188'	Mean Annual Temp. °F: 50.0	Baro. Press. – P_a: 13.2
State: New Mexico			

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
8188	8188	0.663	0.32	0.95	0.12	0.0	2.1	Flange

	FLOW DATA				TUBING DATA		CASING DATA		
NO.	Prover Line Size X 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	Duration of Flow
SI					1820	60			72.0
1.	2.07 X 1.250	215	18.0	87	1775	68	0	0	1.0
2.	2.07 X 1.250	215	25.0	82	1750	72	0	0	1.0
3.	2.07 X 1.250	210	38.0	80	1720	75	0	0	1.0
4.	2.07 X 1.250	270	75.0	70	1630	75	0	0	1.0
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	8.12	64.09	228.2	0.9750	1.2281	1.0203	636
2.	8.12	75.53	228.2	0.9795	1.2281	1.0209	753
3.	8.12	92.10	223.2	0.9813	1.2281	1.0206	920
4.	8.12	145.74	283.2	0.9905	1.2281	1.0276	1479
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	0.34	547	1.46	0.961
2.	0.34	542	1.44	0.959
3.	0.33	540	1.44	0.960
4.	0.42	530	1.41	0.947
5.				

Gas Liquid Hydrocarbon Ratio	0.0 Mcf/bbl.	
A.P.I. Gravity of Liquid Hydrocarbons	65.0 Deg.	
Specific Gravity Separator Gas	0.663	XXXXXXXXX
Specific Gravity Flowing Fluid	XXXXX	0.663
Critical Pressure	670 P.S.I.A.	670 P.S.I.A.
Critical Temperature	375 R	375 R

P_c 1833.2 P_c^2 3361

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	3198	1783	3179	181
2	3109	1756	3082	278
3	3004	1725	2977	383
4	2700	1645	2706	655
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 5.1308$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.6241$

Posted to Book

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 5362$

ID 2 + Book

SI

Absolute Open Flow: 5362 Mcfd @ 15.025 | Angle of Slope θ: 51.8 | Slope, n: .788

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	BJ Well Testing	Don Craig	Don Craig