

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED
Form 10-1-78
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL SEP 25 '87

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 8-18-87		O. C. D. ARTESIA, OFFICE	
Company PETRUS OIL CO.				Connection AIR NEW WELL			
Pool Wildcat - <i>Atoka</i>				Formation ATOKA		Unit	
Completion Date 08-14-87		Total Depth 11,775		Plug Back TD 10700		Elevation 3821.0'GR	
Csg. Size 5.5		Wt. 17		Set At 10700		Perforations: From 10374 To 10390	
Tub. Size 2.875		Wt. d		Set At 10332		Perforations: From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 10314		County EDDY	
Producing Thru TUBING		Reservoir Temp. °F 179 @ 10382		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 10382		H 10382		G _g .758		% CO ₂ .33	
				% N ₂ 2.37		% H ₂ S 0	
				Prover 0		Meter Run 4.0	
						Taps FLANGE	

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow	
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.
Sl.							2295	83	0	0
1.	4.03	X	1.50	110	4.0	84	1920	83	0	0
2.	4.03	X	1.50	110	6.0	80	1900	83	0	0
3.	4.03	X	1.50	110	20.0	81	1730	83	0	0
4.	4.03	X	1.50	110	30.0	82	1660	83	0	0
5.										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	10.84	22.20	123.2	0.9777	1.1486	1.0138	274
2	10.84	27.19	123.2	0.9813	1.1486	1.0142	337
3	10.84	49.64	123.2	0.9804	1.1486	1.0141	615
4	10.84	60.79	123.2	0.9795	1.1486	1.0140	752
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.19	544	1.36	0.973	8.332	59.0	0.758	XXXXXX	662	401
2	0.19	540	1.35	0.972						
3	0.19	541	1.35	0.972						
4	0.19	542	1.35	0.973						
5										

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1	1868	3490	1590	
2	1847	3413	1667	
3	1672	2796	2283	
4	1599	2557	1523	
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.0134$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.0134$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1514$

Gas Liquid Hydrocarbon Ratio 8.332 Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons 59.0 Deg.

Specific Gravity Separator Gas 0.758 XXXXXXXXXX

Specific Gravity Flowing Fluid XXXXXX

Critical Pressure 662 P.S.I.A. 648 P.S.I.A.

Critical Temperature 401 R 485 R

Absolute Open Flow <u>1514</u> Mcfd @ 15.025		Angle of Slope <u>45.0</u>	Slope, n <u>1.000</u>
Remarks:			
Approved By Division	Conducted By: <i>Bennett & Cathey</i>	Calculated By: <i>Richard Townley</i>	Checked By: