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NEW MEXICO OIL CONSERVATION COMMSSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
NOV 26 1973
O. C. C.
ARTESIA, OFFICE

Type Test: ☐ Initial ☒ Annual ☐ Special				Test Date: 11-15-73	
Company: Robert N. Enfield		Connection: Southern Union			
Pool: Buffalo Valley		Formation: Atoka Morrow		Unit:	
Completion Date: 12-18-72	Total Depth: 8670'	Plug Back TD: 8562'	Elevation: 3533' KB	Farm or Lease Name: Federal	
Csg. Size: 4½ / Wt: 10.5 11.60 / d: 4.052 4.000 / Set At: 8670'		Perforations: From 8441' To 8474'		Well No.: 1-11	
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: 1.995 / Set At: 8304'		Perforations: From Open To Ended		Unit: A / Sec.: 11 / Twp.: 15s / Rge.: 27e	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 8115'		County: Chaves	
Producing Thru: Tubing	Reservoir Temp. °F: 147° @ 8458'	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
8458'	–	0.644	0.29	0.40	0.00		X	F

	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						1670		PACKER		48.0
1.	4	18/64 1.75	371	36	61	1166	68			1.0
2.	4	15/64 1.75	371	25	74	1293	70			1.0
3.	4	12/64 1.75	371	14	74	1405	70			1.0
4.	4	9/64 1.75	371	7	74	1512	69			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	14.93	117.61	384.2	0.9990	1.246	1.037	2266.5
2.	14.93	98.00	384.2	0.9868	1.246	1.034	1860.2
3.	14.93	73.35	384.2	0.9868	1.246	1.034	1392.2
4.	14.93	51.86	384.2	0.9868	1.246	1.034	984.4
5.							

NO.	P_r	Temp. °R	T_r	Z
1.	0.57	521	1.42	0.930
2.	0.57	534	1.45	0.935
3.	0.57	534	1.45	0.935
4.	0.57	534	1.45	0.935
5.				

Gas Liquid Hydrocarbon Ratio 90.322 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 60.8 Deg.
Specific Gravity Separator Gas 0.644 XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 673 P.S.I.A. – P.S.I.A.
Critical Temperature 368 R – R

P_c 2149.2 P_c^2 4619.1

NO	P_t^2	P_w*	P_w^2	$P_c^2 - P_w^2$
1	–	1583.2	2506.5	2112.6
2	–	1708.2	2917.9	1701.2
3	–	1846.2	3408.5	1210.6
4	–	1939.2	3760.5	858.6
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.816$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.330$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4636$

Absolute Open Flow 4636 Mcfd @ 15.025 Angle of Slope θ 48° 10' Slope, n 0.895

Remarks: * BHP @ (-4925') 8458' used for pressure calculations

Joe A. Coleman

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	COLEMAN PET.ENG.CO.	JOE A. COLEMAN	JOE A. COLEMAN