N. M. O. C. C. COPY

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

Form C-122
Revised 9-1-65

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FEB 20 1975
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 2-4-75	
Company: Yates Petroleum Corp.		Connection: None			Unit: -
Pool: Richards Knob		Formation: Cisco			
Completion Date: 11-7-73	Total Depth: 8629		Plug Back TD: 7479	Elevation: 3632' KB	Farm or Lease Name: Federal CX
Csg. Size: 5 1/2 / Wt.: 15.5 / 17.0 / d: 4.950 / 4.892 / Set At: 7503			Perforations: From 6545 To 6768		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: 1.995 / Set At: 6517			Perforations: From Open To		Unit: H / Sec.: 7 / Twp.: 18 / Rge.: 25
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 6517		County: Eddy
Producing Thru	Reservoir Temp. °F: 125 @ 6467	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
6657	6657	0.677	2.58	0.85	0.00		3"	Pipe

	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						1873.0		Packer	Choke	1 year
1.	3"	x 0.75"	220.0	35.0	99	1817.0	60		12/64"	105 min
2.	3"	x 0.75"	305.0	49.0	83	1803.0	61		14/64"	60 min
3.	3"	x 0.75"	490.0	63.0	79	1790.0	64		18/64"	60 min
4.	3"	x 0.75"	600.0	90.0	70	1759.0	62		20/64"	75 min
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	2.776	90.34	233.2	.9645	1.215	1.020	299.8
2.	2.776	124.87	318.2	.9786	1.215	1.029	424.1
3.	2.776	178.05	503.2	.9822	1.215	1.048	618.2
4.	2.776	234.92	613.2	.9905	1.215	1.062	833.5
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	0.34	559	1.47	.962
2.	0.47	543	1.43	.944
3.	0.74	539	1.42	.910
4.	0.91	530	1.40	.886
5.				

Gas Liquid Hydrocarbon Ratio: Dry Gas Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: - Deg.
Specific Gravity Separator Gas: 0.677 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 677 P.S.I.A. - P.S.I.A.
Critical Temperature: 379 R - R

P_c 2320.2 P_c^2 5383.3

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2311.2	5341.6	41.7
2		2285.2	5222.1	161.2
3		2259.2	5104.0	279.3
4		2241.2	5023.0	360.3
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 14.941$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 11.610$

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AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]$ = 9684

Absolute Open Flow: 9684 Mcfd @ 15.025 | Angle of Slope θ: 47.8 | Slope, n: 0.907

Remarks: Bottom Hole Pressure measured @ (-3025) 6657'

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Coleman Petr. Engr.	R. West	Joe A. Coleman