MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Revised 9-1-

Type Test: ☒ Initial FOUR POINT ☐ Annual ☐ Special		Test Date: 7-10-82	RECEIVED 1980 FNL JUL 30 1982 O. C. D. ARTESIA, OFFICE
Company: PENNZOIL Co.	Connection: AIR NEW WELL		
Pool: WILDCAT	Formation: WOLFCAMP		Unit
Completion Date: 7-8-82	Total Depth: 11,400	Plug Back TD: 11,350	Elevation: 3312.2 KB
Farm or Lease Name: WINCHESTER FEDERAL			
Csg. Size: 4.50 / Wt.: 11.6 / d: 4.000 / Set At: 11,390	Perforations: From 8849 To 9029		Well No.: 1
Tbg. Size: 2.378 / Wt.: 4.7 / d: 1.995 / Set At: 8774	Perforations: From OPEN To ENDED		Unit: H / Sec.: 4 / Twp.: 20S / Rge.: 28E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE	Packer Set At: 8774		County: EDDY
Producing Thru: TUBING	Reservoir Temp. °F: 150 @ 8939	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2
			State: NEW MEXICO
L: 8939	H: 8939	Gg: 0.6717	% CO_2: .326
% N_2: 1.519	% H_2S:	Prover:	Meter Run: 4.028
Taps: FLANGE			

FLOW DATA / TUBING DATA / B.H.P. 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.	CHOKE	Duration of Flow
SI							3016	96	3000		48 HR 50MI
1.	4.00	X	1.500	600.	1.2	104	2735	80	2370	5/64	1 HR
2.	4.00	X	1.500	600.	2.1	100	2575	80	2420	7/64	1 HR
3	4.00	X	1.500	600.	5.8	90	2440	78	2385	9/64	1 HR
4	4.00	X	1.500	600.	21.0	76	2340	77	2290	13/64	1 HR
5.	4.00	X	1.500	700.	27.0	86	1753	63	1640	18/64	4 HR

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	11.1200	27.13	613.2	.9602	1.2199	1.0489	371
2	11.1200	35.88	613.2	.9636	1.2199	1.0500	493
3	11.1200	59.64	613.2	.9723	1.2199	1.0529	828
4	11.1200	113.48	613.2	.9877	1.2199	1.0600	1612
5	11.1200	138.77	713.2	.9759	1.2199	1.0630	1953

NO	P_t	Temp. °R	T_t	Z
1	.92	564	1.50	.909
2	.92	560	1.49	.907
3	.92	550	1.47	.902
4	.92	533	1.42	.890
5	1.07	546	1.46	.885

Gas Liquid Hydrocarbon Ratio 9.6 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 70.4 AT 60° Deg.
Specific Gravity Separator Gas .670 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 668 P.S.I.A. ____ P.S.I.A.
Critical Temperature 375 R ____ R

P_c 3821.3 P_c^2 14602.3

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		3507.6	12303.3	2299.0
2		3313.1	10976.6	3626.0
3		3151.9	9934.5	4668.0
4		3040.7	9245.9	5356.0
5		2316.6	5366.6	9236.0

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.7264$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.7264$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4,394.9$

Posted FD-2 8-6-82 Comp. + BK

Absolute Open Flow 4,394.9 Mcfd @ 15.025 Angle of Slope θ 45.0 Slope, n 1.000

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	DON BENNETT	BENNETT-CATHEY	