

C/SF

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 11/06/96		API No. 30-015-29002							
Company KERR-MCGEE CORPORATION		Connection MARATHON		NM-025235-A							
Pool Indian Basin Morrow Gas		Formation MORROW		Unit SW-258							
Completion Date 10-22-96		Total Depth 9590		Plug Back TD 9480							
Elevation 3760 RKB		Farm or Lease Name MARTHA CREEK		Well No. 3							
Coq. Size 4-1/2	Wt. 11.6 13.5	d 4.00 3.920	Set At 9590	Perforations: From 9210 To 9420	Sec. 30 Twp. 21S Rge. 24E						
Thq. Size 2-3/8	Wt. 4.7	d 1.995	Set At 9048	Perforations: From							
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At NONE							
Producing Thru TUBING				Baro. Press. - P _a 13.1							
Reservoir Temp. °F 139		Mean Annual Temp. °F 74		State NEW MEXICO							
L 9315	H 9315	G _g .6026	% CO ₂	% N ₂	% H ₂ S						
FLOW DATA				COUNTY EDDY							
TUBING DATA				METER RUN 2.068							
CASING DATA				TAPS FLG.							
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											
1.	2.068X	.750		739.6	2.25	80	1700		1771		48
2.	2.068 x	.750		756.9	8.41	84	1710		1740		1
3.	2.068 x	.750		760.4	14.44	82	1630		1645		1
4.	2.068 x	.750		774.4	46.24	82	1540		1555		1
5.							1388		1400		1
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mc/d				
1	2.779	41.15	752.7	.9813	1.269	1.065	152				
2	2.779	80.47	770.0	.9777	1.269	1.063	295				
3	2.779	105.7	773.5	.9795	1.269	1.064	388				
4	2.779	190.8	787.5	.9795	1.269	1.065	702				
5											
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 183 Mcf/bbl.						
1	1.12	540	1.47	.881	A.P.I. Gravity of Liquid Hydrocarbons 64.0 Deg.						
2	1.14	544	1.48	.885	Specific Gravity Separator Gas .6026 XXXXXXXXXX						
3	1.15	542	1.47	.884	Specific Gravity Flowing Fluid XXXXXX .641						
4	1.17	542	1.47	.882	Critical Pressure 672 P.S.I.A. 671 P.S.I.A.						
5					Critical Temperature 368 R 380 R						
P _c 1784 P _c ² 3183											
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$						
1		1753	3073	110	$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$						
2		1658	2749	434							
3		1568	2459	724							
4		1413	1997	1186							
5											
Absolute Open Flow 1820 Mc/d @ 15.025					Angle of Slope @ 45.0					Slope, n 1.000	
Remarks:											
Approved By Division											
Conducted By: THURMOND-MCGLOTHLIN, INC.				Calculated By: IBM COMPUTER				Checked By: J W CHISUM			